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REPORT

OF THE

CONSERVATOR OF FORESTS,

FOR THE

1651

OFFICIAL YEAR

1860-61.

Madras:

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OFFICE OF CONSERVATOR OF FORESTS,
OOTACAMUND, *24th September* 1861.

No. 656.

FROM CAPTAIN H. R. MORGAN,

Officiating Conservator of Forests.

To J. D. SIM, Esq.,

Secretary to Government, Revenue Department, Fort Saint George.

SIR,—1. I have the honor to report for the information of Government, that I have inspected the following Forests during the past year, and have written the undermentioned special Reports.

2. FORESTS VISITED.—Salem Forests... ... . Reported on.

Denkincottah...., ...	do.
South Arcot.....	do.
Nellambúr Teak Plantations.....	do.
Neilgherry Sholas.....	do.
Cinchona Plantations.....	do.
Mudumallai Forest...	do.
Sigúr Forest.....	do.
Anamallai Forest.....	
Australian plantations.....	

3. SALEM.—A complete establishment for Salem has at length been organised with a set of Rules* approved of by Government. The Forests had suffered much from the Railway pressure, it is to be hoped that under a careful system of conservation they may at all events be preserved from total destruction,† a fate they were fast approaching under the old system. The Ponagram Forests of Achawood, on the banks of the Cauvery, are yet unworked, and if not destroyed by the Bunjarras and others to feed their cattle, will, when opened up by a good road afford a valuable supply of timber for the Salem market. The system of pollarding the large trees and cutting saplings for the food of cattle in the dry season has been strictly forbidden, and Native officials in remote parts warned to prevent it.

* Vide Appendix J.

† Vide Mr Blenkinshop's Report, Appendix E.

4. CONOLLY TEAK PLANTATIONS AT NELLAMBÚR.—These plantations consisting of nearly eleven hundred acres of young Teak from the age of one to fifteen years are progressing favorably, but from want of funds, the planting for the last three years has fallen off from one hundred to some fifty acres annually. A fresh grant of 6,000 Rupees has been made, and I have no doubt but that we shall soon make up the lost ground. Owing to want of funds the thinning of the old plantations had not been carefully attended to, the consequence is that, some of the plantations stood still and others rather retrograded; this will now be remedied, and with an Assistant to supervise the thinnings, the plantations will soon recover. I have suggested that the Assistant in charge of the Neilgherry Sholás should also supervise these plantations, as the present Native Sub-Conservator though quite equal to the task of planting out (a work he has hitherto executed with great ability) is not equal to the judicious thinning of these very valuable young plants on which the proper growth of the timber so much depends. A road from the foot of the Carcúr Ghat to Nellambúr passing through much Government Forest land is also in contemplation, this will tend much to open up this hitherto avoided part of the country, and by encouraging bazaar men and settlers, coolies will become obtainable: hitherto it has been the persevering policy of of the Theropád of Nellambúr to keep out every one, and under pretence of keeping a bazaar and supplying travellers with grain, &c., he has hitherto contrived to starve all travellers putting up at Nellambúr, as the answer in general is, no grain, no sheep, no fowls.

A survey of the Nellambúr plantations has been recommended; at present it is only by the number of trees planted, we arrive at an approximate area.

5. NEILGHERRY SHOLAS.—An Assistant Conservator with two Overseers and seven Peons have been granted for the preservation of these Sholás, and for the due supply of firewood and charcoal to the inhabitants. Wood is supplied at the Sholà side at 12 Annas the load of 750 lbs., and charcoal at 10 Annas the bag in the Cantonment. A large sholá for the supply of Ootacamund was sold to the highest bidder at auction under certain conditions, and the system appears to have worked well, at least no complaints of dearness or scarcity of wood have reached me. People have only to hire a cart, send it to the shola and obtain their wood, the cost per ton rarely exceeding Rupees 4-8-0, a moderate price I consider. Coonoor and Wellington Barracks are supplied from a shola in their vicinity under the same conditions. The gaps in the sholas are planted with the fast growing *Australian Acacias, Stricta and Molissima*, which make excellent firewood, splitting easily, and burning even when green. As there are no large forests near Ootacamund, I have suggested that the Devi Forest, distant some eight miles, should be worked; if a good road were made to this forest, Ootacamund might be supplied from it for years to come, and if the trees are judiciously thinned out, the forest will become a very valuable site for a Cinchona plantation. The soil is very superior, the aspect is good, abundant moisture in the ravines, and the elevation from 6 to 7,500 feet. I am now proposing that a road of an easy gradient not steeper than 1 in 18 be made by Burgher labor under the Assistant Conservator, this road will open a new part of the Hills and at the same time render firewood abundant.

Major Babington's Report, Appendix F.

6. WELLINGTON FIREWOOD PLANTATIONS.—These plantations have not hitherto made the progress expected of them, the causes are plain, the greater part of the plantations face the south, and from being exposed to the monsoon the surface soil has been completely washed away. Had the Northern face of the valley been first planted, I have no doubt from the excellence of the soil on that face, that the progress of the plants would have been every thing we could have desired. The system of pitting is not good for rapid growth. I have recommended the trench system and a larger planting of the *Acacia Molissima* which grows quicker than the *Striota* and multiplies itself by suckers to an unlimited extent.

7. CINCHONA PLANTATIONS.—The Cinchona plants in the gardens embracing at least five very valuabe varieties are progressing favorably; in November next the ground at the Neddivuttum site will be put in order, and by July there is every probability of some 50,000 plants of the valuable red bark (*C. Succirubra*) being ready for planting out. There will also be plants of other varieties, more suitable to a greater elevation, such as the Dodabetta site 7,400 feet, and the Avalanche site. Further supplies of seeds and plants from Kew are also shortly expected, and there is every probability of our soon being in a position to stock at least a thousand acres. We are also promised seeds and plants from Java, but with the exception of the *C. Calisaya*, they have nothing of any value.

8. TEA PLANTATIONS.—I have inspected the tea plantations of Messrs. Mann and Rae, the former has not been much extended, but the Tea produced from it, though manipulated by a person who has not been properly taught, is of a superior description and promises well for Neilgherry Tea. The latter plantation contains only young plants, but covers an extent already of some thirty acres, and is daily increasing; when these trees bear seed some three years hence, a nucleus for the supply of future plantations with seed to almost an unlimited extent will be created, and there is but little doubt, but that in a very few years hence, the Neilgherries will be in a position to export Tea largely. The present system of grass-puttah holding by the Burghers must first be placed on a proper basis, before parties will come forward to colonise these hills. The Burgher holdings should be as clearly defined as those of any other individual, unless this is done, endless vexatious disputes must arise, and consequent discouragement to colonisation. The selling of sholas has been a subject of deep consideration, if Tea and Cinchona plantations are to be formed by speculators, they must have some Forest land, say, ten per cent. of the entire grant; for the woodlands they should pay a far higher rate than for grass-land, the reason being that not only must the expense of planting fresh land be undertaken by Government to supply the loss of Forests

Vide Report, Appendix K.

destroyed, but the shola land being in heart is ten times more valuable than the grass-land, which takes from two to three years of digging and manuring to get it fairly in heart. An upset price of 2½ Rupees per acre for the grass land, and 10 Rupees for the sholá-land would be a fair approximation. The land to be sold outright to the highest bidder. The surplus amount obtained by the sale of the wood-land, to be bonâ fide expended in the creation of new wood-lands. The present rate of 10 Rupees per acre for grass-land seems to be too high for the fee simple.

9. SAW-MILL IN OOTACAMUND.—A saw-mill is much required, the Native sawyers charge very high and spoil the wood; if a saw-mill driven by the surplus water from the lake were established, it would be a boon to the public and a saving to Government. At present plank sawing adds fifty per cent. to the cost of the wood. The amount of sawn timber required by the public would probably amount to 10,000 square feet per month.

10. ANAMALLAIS.—The sales of wood in this Forest have fallen off more than thirty per cent. in the last year, the reason alleged is want of axemen. But Rupees 44,078-2-5 were realized in 1860-61, against Rupees 67,259-10-5 in 1859-60. There was also a change of Officers during the working season, which may probably have caused some difficulties. There are many improvements required in this Forest, such as a new timber slip; the present make-shift of a slip being in most places simply the rocky bed of a water course, and the labor and expense entailed in slipping the dockyard planks by means of elephants is very great. A proper slip is far more required than a new ghât; a slip made of logs of trees would cost not more than 3,000 Rupees, whereas a ghât of 1 in 20 would cost 15,000 Rupees, and the cost of carriage would exceed that of slipping by fifty per cent. A ghât was traced and estimated for, but in my opinion it is not required. The present cost of slipping the planks by elephants is some 1,500 Rupees, if men were employed on a proper slip the cost would be under 500 Rupees. I have directed an estimate for a slip to be prepared, and hope to submit it shortly. The proposition to establish a saw-mill, cannot, I fear, be entertained, as the present establishment though very strong *apparently* for the work turned out, is barely able to get through the ordinary demands. A saw-mill would require a skilled Establishment, and the chances are that, fever would soon incapacitate them from labor. As a rule in these very feverish jungles, it does not pay to attempt any thing beyond what can be accomplished by the rudest labor. The Teak plantation here has not been very successful, a small clearing of two acres was planted, but most of the plants died; it is a question, if it is worth while to plant here, for though we have excellent soil, a fine situation, and Teak growing remarkably well, we labor under the following disadvantages, viz., a very feverish locality, scarcity of labor and 40 miles of land carriage. If it could be shown that the Anamallai timber fetched by ten per cent, only a higher price in the market than Nellambúr Teak, then it would pay to plant on the Anamallais; but at present prices are much the same, and as we have thousands of acres at Nellambúr excellently adapted for Teak planting with water carriage, it does not seem expedient at present to extend the Teak plantations on the Anamallais. Further, the only market where we should not be undersold, would be the Coimbatore market, and the amount taken would be insignificant. To plant 100 acres and keep them clean for one year requires the labor of some 12,000 coolies or 33 daily laborers. We have great difficulty in obtaining sufficient labor to repair our roads, how then could we obtain labor for large plantations.

Captain Brine's Report, Appendix A.

11. MUDUMALLAI.—The returns from this Forest during the past year appear small, but only half a year is represented, the forest having been worked for the Wellington Barracks for the first six months of the year, and only made over in November last to the Conservancy Department. This Forest is rented from the Theropád of Nellambár and has been worked for the Wellington Barracks, supplying them with more than 1,50,000 cubic feet of Teak at the market rates prevailing in Ootacamund and Mysore. On the adjustment of the Barrack Accounts with the Forest, it was found that the Forest possessed in prepared timber, plant, and money due by the Barracks for timber supplied, a sum amounting to Rupees 52,012-8-0. Thus by the working of this Forest, the Barracks have gained largely, as formerly they obtained their timber from the Anamallais at a cost of 4 Rupees the cubic foot, and with great difficulty. If we allow that the

50,000 × 4 = 20,0000
50,000 × 1-7 = 71,875
saving Rs. 1,28,125.

Barracks must have obtained at least 50,000 cubic feet of this timber from the Anamallais at a cost of Rupees 4 the cubic foot (the Ootacamund market then supplying no timber) instead of Rupees 1-7-0 the rate charged by Mudumallai Forest, then have the Barracks gained by Mudumallai nearly a Lack and a half of Rupees, besides a very great saving effected in the time occupied, as a glance at the returns would soon show. Their timber supplies before Mudumallai was worked, averaging some 10,000 cubic feet annually; afterwards they rose to 40,000 cubic feet, or four times as much.

Captain Gib's Report, Appendix C.

There are still some two years of the lease to run, and every effort is made to get out as much timber as possible and store it at Sawyer's village, as unless we have this supply of timber for our Public buildings, Sigúr Forest being exhausted, we must go either to Mysore or the Anamallais for our timber; from the former, we can obtain no long timber, and from the latter, it will cost us 4 Rupees. a cubic foot. The Jail, New Church, Lawrence Asylum, and Barracks, will require a considerable amount of timber, and that our Depot will afford a full supply of well seasoned long and short wood, is satisfactory.

12. SIGÚR.—The sales of Sandalwood from this jungle have been very satisfactory. Ripe wood (which otherwise might have decayed) has been cut in every available spot, young trees have been carefully tended, and the system of conservancy extended far down the Moyar valley.

The Teak has not been felled, but young trees have been looked after, and preparations made for forming a small experimental plantation.

Jungle woods such as Vengé, Kurramurdah, &c., find but few buyers, the expense of sawing in Ootacamund, acting as a bar to all purchasers. Good and economical sawing would tend much to a large consumption of the superior jungle woods. On the expiration of the Mudumallai lease, we shall only have Sigúr to look to for Teak, and it becomes a question whether we should not take a perpetual lease of Mudumallai, if obtainable on reasonable terms.

13. WYNAAD.—Very little has been done in these Forests as yet, beyond preventing the passing of timber into Mysore, general illegal felling and clearing the Forests for cultivation called Coomree. Until the survey has determined boundaries, it would not be advisable to commence operations of any kind.

14. MADURA.—The conservancy of these Forests has but just commenced, and there is no doubt room for considerable improvement, a small sum for the working of these Forests as an experiment has been sanctioned, and it remains to be seen with what success. It is to be hoped that the felling of the timber by the Forest Department and periodical auctions will be found preferable to the License system, which at the best, always occasions trouble and is of doubtful advantage; parties taking out Licenses always felling the smaller trees and leaving the ripe ones as they cost more in the first instance though they pay best in the long run. I myself am a decided advocate for working all valuable jungles, and it remains to be seen, if Madura is to be classed under this head, or like Salem to be left to the License system. Mr. Sperchneider's report next year will, I trust, decide the question.

Mr. Sperchneider's Report, Appendix I.

The renting of the Forest products has always been a vexed question, as parties under pretence of collecting them, steal Sandalwood, damage young trees, and often carry off logs. I am of opinion that the Forest products were better managed by the Conservancy Department where the products are collected in valuable jungles, barks, dyes, seeds, &c., collected from scrub jungles might fairly be open to all.

An increased Establishment for the Madura Forests has been applied for, and, I trust, that next year we shall be in a condition to work them systematically.

Report, Appendix, G.

15. NORTH CANARA.—This very important Forest has not fallen off, though Mr. Muller complains greatly of his present Establishment. An increased Establishment has been applied for, and it is to be hoped that with increased means conservancy will be more strictly enforced. I do not agree with Mr. Muller in the idea that the Establishment should be under the Collector, who must already have sufficient occupation, without being troubled with the executive details of the conservancy system, and which more properly belong to a separate Department. It appears that Dr. Cleghorn thrice visited the Forests of North Canara, but reframed from recommending a much increased Establishment. Looking at the magnitude

of the operations and the small pay of the present Establishment, I have deemed it absolutely necessary to recommend an increase. I believe Dr. Cleghorn had no other objections against an increase, but "Financial pressure."

The clearing of the Kalanuddy has been again delayed in consequence of the Department Public Works, being unable to furnish an Overseer for the work, it is very important that the rocks in this river should be blasted. A sum of Rupees 6,000 has been granted, but as yet none has been expended. I trust we shall be able to obtain a skilled Overseer from the Department Public Works before the present dry season commences to enable us to make some progress this year, or we shall lose a very large return. The sum of Rupees 6,000 is only for partial clearings of the Kalanuddy river, to clear the river effectually, Mr. Muller roughly calculates the cost at a lac of Rupees, but even this large sum would be more than repaid by the immense quantity of valuable jungle woods which could be cheaply brought down. It is of the most vital importance to our Forests that we should avail ourselves to the utmost of water carriage when procurable, and to neglect even the partial clearing of the Kalanuddy will be to throw away money, for those jungle trees now in their prime, the value of which might be at once realised, must decay in a few years, and thus be lost.

16. SOUTH CANARA.—The operations in these Forests for the last year are satisfactory; the Revenue is steadily increasing, whilst at the same time the pruning and careful preservation of numerous Teak and Blackwood saplings is carried on, the beneficial effects of which will not appear for some years to come.

Jealousy between the Revenue and Forest Departments is complained of, and time alone will convince the Native Revenue authorities that they must support the Department instead of thwarting it on all occasions. Collectors, however, anxious to support the Forest Department, are constantly ignored by their own Native subordinates. An additional Establishment has been proposed for these jungles, and a grant of Rupees 3,000 for working them. As the system becomes further developed, it will be necessary to take over the eventual working of them, instead of carrying on the stump fee system. It is also desirable that Teak plantations should be formed on the banks of the river in the Sûliah jungles, and it will be necessary that a separate grant be made next year for the above object.

17. CUDDAPAH.—These jungles have been but lately taken over, and a small Establishment sanctioned. They are worked much on the same principle as the Salem Forests, viz., the License system, and it does not appear to me that we shall ever be able to introduce any other system. The jungles are thin, the valuable trees far apart and roads but few. The principal wood of commerce is the Red Sanders or *Pterocarpus santalinus*; a heavy seignorage is readily paid by merchants on this wood.

The conservation of these jungles was commenced only just in time, a few months later, an enormous havock would have been occasioned. When we consider that the Railway runs through their entire extent from Naggari to Cuddapah, exactly the same effects as followed the Establishment of the Railway through the Salem District would have taken place in Cuddapah. The substitution of iron pot sleepers for wooden ones on the Northern parts of the Line will tend much to relieve the Cuddapah jungles, though it is a question, if the very salt-earth in the Cuddapah and Bellary Districts will not soon corrode the iron, and cause a return to wooden sleepers. The packing of the wooden sleepers in sand and gravel, besides exposing their surfaces to the air, has tended much to preserve them; wooden sleepers tightly packed above and around with the salt-earth that prevails to a great extent in the Salem and other Districts, were soon destroyed the best Vóngé sleepers not excepting.

The Railway passing through the principal jungles in Cuddapah, occasions a great traffic in wood, and the demands in consequence are already becoming very great. No planting of any kind has as yet been undertaken in the Salem and Cuddapah jungles, but if the demand for timber goes on at the present rate, it will become absolutely necessary to plant. I would not recommend an elaborate system, such as is pursued in Nellambúr, but simply the ploughing up of a few acres in an eligible spot, sowing the seed of Forest trees broad-cast, and then thinning out. Transplanting in such dry and hot regions, unless very considerable and expensive precautions were adopted, would most likely fail. There are many favorable spots for the above experiment in the Bálpilly jungles of Cuddapah and the Cotaputty jungles of Salem, also in the Denkincottah jungles where the cedar tree flourishes.

18. AVENUES.—I am of opinion that the Avenues should be placed under Collectors, and heads of villages made responsible for the proper care of the trees; at present the Engineer Department has the charge of Avenues; but I do not find that Overseers and others take much interest in the preservation of the trees, and villagers may cut the trees to pieces to feed their cattle, without the headman attempting to prevent them or inform against them. If the Engineer Department simply planted the trees and then handed them over to the Collector, the system would no doubt work better, the heads of villages being held strictly responsible for the preservation of the trees from wanton destruction.

19. FIREWOOD.—To supply the increasing demands of the Railways, Iron smelting and Indigo concerns for firewood, now engages my serious attention. A tax of 12 Annas per ton or 6 Annas per bandy load has been levied in some Districts; but large concerns, such as the Tirunamallai iron works, and Mr. Fischer's works in the Ahtúr Taluq of Salem, object to pay this small tax, and representations have been made for a remittance of the above tax. I am of opinion that all great works should compound for their firewood, the Railway, the Iron smelters, the Sugar and Indigo factories, &c., compounding for the tax would save a vast amount of vexatious watching and levying of small sums.

It will soon be necessary to plant many acres of ground with quick growing Acacias to supply the enormous demand for firewood, which is daily on the increase. Some idea of the consumption of firewood may be formed, when I mention, that at Tirunamallai a circle of some 12 miles in diameter, which abounded in small wood, is now almost entirely denuded of every tree, and this in the course of some seven years. In the Salem District, the consumption of firewood annually amounts to many thousands of tons; in Cuddapah the export is becoming considerable; in South Arcot, especially at Tirunamallai, the expenditure is enormous. It is clear that some remedy must be devised. I recommended to the Railway Agent the growing of the *Inga dulcis* along the banks of loose earth on each side of the Railway. If this were persevered in throughout the Line, in a few years they would become entirely independent of external supplies. Instead of planting this useful tree for firewood, prickly pear has been planted, which is quite useless, and is further a public nuisance. The Aloe has also been largely used; it makes a good fence, but should give way to a fuel producing tree.

20. FENCES.—Our Nellambúr Teak saplings were, I believe, found useful for a rapid fencing of the Line; this year we shall have a large number to dispose of. I may mention it has been found, that if the upright posts for fences are buried in gravel so as to secure efficient drainage, they last twice as long as when simply buried in earth. The same effect has been found to follow when sleepers are so treated.

21. PLANTATIONS FOR FIREWOOD ON THE NEILGHERRIES.—There are certain situations where plantations for firewood on the Neilgherries might be found to answer; land intervening between sholas where probably trees once grew and on which there is only a dense brushwood growing on rich soil, if the brushwood is cut down and burnt in the dry weather, and the seed of *Acacia stricta* and *mollissima* scattered broad-cast, firewood plantations might be raised at a cost of about 20 Rupees per acre, but our space is limited and we cannot command many acres of the above description. There is a good extent at the Governor's shola now being worked. On the first rains falling, it would be necessary to thin out the plants, and for the first year at least to keep down the weeds, &c. Any other mode of raising firewood plantations especially in grass-land would cost from 70 to 100 Rupees per acre. With respect to the *A. mollissima* or yellow flowering Australian Acacia for firewood plantations, it is a curious fact, that hares rarely touch it, whereas they will destroy the *A. stricta* by hundreds; the reason I conceive is that one is much more bitter than the other, the roots of *A. mollissima* when dug up, emit a powerful and very unpleasant odour. The bark of the *A. mollissima* is useful for tanning, and from the wood I have obtained tar.

22 PEAT.—The use of Peat does not seem to be on the increase, the cause is not clear to me, as Peat when mixed with firewood or even alone forms an excellent fire, indeed a better could not be desired. Natives have an objection to it, as in their opinion the fire is not so cheerful as the blaze from wood, and consequently, they imagine the heat given out is less, but in this, they are much mistaken; in trying some Peat charcoal at Wellington a few years ago, it was found that the radiating heat from Peat charcoal was fifty per cent. greater than that of wood charcoal.

23. Concluding Remarks.—In reviewing the Forest Conservancy results of the year, it is of importance to bear in mind that though the revenue has not increased, destruction of Forests over a very large area of country has been arrested; complete Establishments for some Districts organized with rules clear and distinct. Planting in various localities has been carried on, and preparations made for increasing this important branch of conservancy. The Cinchona experiment is promising. Improvements are contemplated in the working of various Forests as yet not systematically worked or conserved, and the Accounts are audited monthly instead of annually.

Sickness has been rife amongst the Officers of the Department; Dr. Cleghorn and Lieutenant Beddome are on sick leave to England; Captain Brine on the Neilgherries, Mr. Morison at Madras, and Mr. Reid who relieved me from the charge of Mudumallai has died. Thus out of an Establishment of eight Officers, one has died and four are absent sick. From this it will be seen that a Forest appointment is no sinecure, the utmost precautions at times being inadequate to the warding off of fever.*

24. Assistants.—I am well satisfied with the exertions of my Assistants for the past year, many of them have had very laborious duties to perform, and through their exertions, the Conservancy system though still in its infancy, is beginning to assume a definite shape; but it will take years to properly develope the system, so that it may become a very important feature in increasing the resources of the country.

25. Government Gardens, Ootacamund.—These gardens during the past year have been considerably improved, the grassing of the lower part gives a lawn-like appearance which was not possessed before. The glass houses have been of the greatest use in acclimatising the Cinchona plants received by Mr. Cross, and in the raising of seedling plants. Mr. McIvor's success in raising seedlings and propagating cuttings from the plants brought by Mr. Cross has been very great. The trees are in the highest health, and their rate of growth is exceedingly fast; the Dutch plants average about six feet a year, and I see no reason why our plants should not equal theirs Mr. McIvor is quite right when he says, shelter not shade is what the plants require. What was observed by Mr. Cross of the habit of the *C. succirubra* in dense shade on the Andes, has been observed by me in the habit of the *Eucalyptus robusta* when planted in dense shade in Ootacamund. I have also observed that trees grow best in partial clearings where they obtain light, air and shelter. Eight feet apart appears a fair distance for the plants, the Dutch in Java make it twenty-five, consequently, the area to be supervised is enormously increased. I have some doubts about the yield of bark from the pruning system. I think it will be found better to cut down the trees and plant new ones, however, this is a matter for experiment and Mr. McIvor will soon be in a position to give the results of both processes Further, the *C. succirubra* is so easily propagated from cuttings, that Mr. Cross informed me that he simply went through the Forest, cutting off branches, trimming them, and sticking them in the ground, when they struck readily.

Vide Mr. McIvor's Report, Appendix L.

The receipts of the Gardens for the past year appear to be on the increase, which is satisfactory. Mr. McIvor's suggestion that the Apprentices should be chosen from the Gardeners, appears judicious, and, I would recommend its adoption. Rupees 15 is not sufficient to ensure a European Apprentice of fair abilities, if the sum were increased to 20 Rupees, it is possible that promising lads would come forward, more especially as there will be openings for advancement in the Government Cinchona plantations.

26 Office.—Native Surgeon F. Appavoo has rendered satifaction in carrying on the complex duties connected with the Office, the labors of which have now much increased, the Bills requiring to be submitted monthly. My head clerk, Mr. Spring, has exhibited a considerable knowledge of the general duties appertaining to his Department, and is well qualified for promotion.

27 Herbarium.—The removal of the Herbarium to the Museum, where proper accommodation can be provided for it, and where every body will have access to it, having already been discussed, I have only to remark that the nature of the Conservator's duties taking him so much away from Madras, he can have neither time or opportunity to supervise the Herbarium; all he can do, by the aid of himself and Assistants, is to add to it.

* Mr Blenkinsop of Salem is dead.

28. USEFUL PRODUCTS WHICH MAY BE CULTIVATED AT DIFFERENT ELEVATIONS ON THE NEILGHERRIES.—On the upper plateau of the Neilgherries—Tea may be cultivated at an elevation from 5,500 to 7,500 feet; Coffee from 3,000 to 5,000 feet; Cinchona, according to varieties from 5,000 to 8,000 feet; Neilgherry nettle which produces some of the highest priced Hemp in the world from 6,000 to 7,000 feet in very rich soil; Cotton, viz., Sea Island and New Orleans from 3 to 5,500 feet; Kulhutty has produced some very superior staple grown from Sea Island Cotton seed; Potatoes are produced from 4 to 7,500 feet, those grown much below 4,000 are wanting in flavor; Kulhutty produces the best Potatoes on the Hills, elevation 6,500 feet. The proportion of Starch yielded by the Kulhutty potatoe exceeds the average given by "Loudon" as the yield of the English potatoe. *Eucalyptus robusta* one of the best timber trees of Australia grows well between the elevation of 5,500 and 7,500 feet; indeed, all the Australian trees of every kind flourish here.

FINANCIAL RESULTS.—The financial results exhibit a profit of more than a lac and a half of Rupees and with a stock of timber worth nearly four lacs of Rupees.

North Canara, our most valuable Forest, is steadily improving.

The Anamallais will this year I trust show a more favorable balance.

Mudumallai has a large stock of timber on hand available for any public works that may be commenced.

Sigúr has proved profitable.

Madura will this year show more favorable results.

The *South Canara* returns though satisfactory may be expected to increase.

Salem and *Cuddapah* will this year show an improved balance sheet.

The *Neilgherries* nearly pay the expenses of conservancy, and next year if

Wynad is worked, the returns will more than cover the outlay.

Nellambúr is improving, the demand for poles will no doubt cover the expense of planting in future.

I have the honor to be,

Sir,

Your most obedient servent,

(Signed) H. R. MORGAN Captain,

Acting Conservator of Forests.

Financial Results of Conservancy, for 1860-61.

Names of Forests.	Receipts by the sale of Timber, &c.			Disbursements including the cost of Establishment, Contingencies, &c			Balance in favor of Government.			Excess of Expenditure over Receipts.			Value of Timber on hand.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Anamallai	44,078	2	5	29,911	15	11	14,166	2	6	...	...	...	71,494	5	7
North Canara	2,53,149	2	8	78,394	7	1	1,74,754	11	7	...	...	...	1,54,006	0	0
South Canara	9,951	3	0	1,682	4	8	8,268	14	4	...	...	...	.....	...	...
Mudúmallai...	2,500	0	6	16,345	9	8	.....	...	...	13,845	9	2	99,492	4	0
Sigúr	11,657	2	8	5,201	1	10	6,456	0	10	...	...	...	15,509	8	11
Neilgherries	4,422	9	0	4,788	5	3	.....	...	...	365	12	3	.....	...	...
Salem	15,376	0	0	4,363	4	1	11,012	11	11	...	...	...	.....	...	...
Madura	2,568	5	1	1,517	5	4	1,050	15	9	...	...	...	.....	...	...
Cuddapah	4,131	0	8	1,257	9	6	2,873	7	2	...	...	...	.....	...	...
Wynád	.....	...	...	2,555	3	10	.....	...	...	2,555	3	10	.....	...	...
Nellambúr	4,615	6	8	2,907	4	7	1,708	2	1	...	...	...	.....	...	...
Total Rupees...	3,52,449	0	8	1,48,924	7	9	2,20,291	2	2	16,766	9	3	3,40,502	2	6
Deduct General Charges.															
Pay of the Conservator of Forests, Establishment, Contingent charges, &c...				19,792	14	2									
Excess of Expenditure over Receipts in Mudúmallai Forests				13,845	9	2									
Do. Neilgherry Sholas ..				365	12	3									
Do. Wynád				2,555	3	10									
							36,559	7	5						
Actual Profit Rupees...							1,83,731	10	9						

APPENDIX A.

Coonoor, *3rd June* 1861.

No. 14.

From Captain J. J. BRINE, *Assistant Conservator of Forests.*

To Captain H. R. MORGAN, *Officiating Conservator of Forests.*

Sir,

1. I have the honor to forward the annual Accounts of the Anamallai Forest for the year 1860-61, countersigned by the Collector of Coimbatore, in accordance with Extract Minutes Consultation, dated 12th November 1857, No. 1,153, paragraph 9.

2. The amount realised by the sale of Timber to the Bombay Dockyard during the past year is Rupees 23,698-1-3. The remainder of the assets is derived from the sales of Rosewood to the Gun Carriage Manufactory at Madras, proceeds of auction sales, Timber supplied to the Railway Company, and to private individuals, and seignorage of trees felled. These, in the aggregate amount to Rupees 20,380-1-2, making a total of receipts of Rupees 44,078-2-5, for the past official year. Against which on the debit side, on account of expenditure, is the sum of Rupees 20,069-3-11, exclusive of the pay of the Establishment, viz. Rupees 9,842-12-0, making a total debit of Rupees 29,911-15-11. Thus the profits for the past year amount to Rupees 14,166-2-6 against those of 1858-59, which were Rupees 45,173-8-6. To account for this falling off, I beg to remark that my predecessor, Lieutenant Beddome, experienced great difficulty in obtaining the requisite number of axemen in the previous season, hence the amount of timber cut was but small. You will also be pleased to observe that while in consequence of this, little work of a remunerative description was being done, yet comparatively a large expenditure was being incurred. Not that it was unnecessarily so, but merely with reference to the year's profit returns. One item for Commissariat Elephants, amounts to Rupees 2,437-8-6. These animals do not work nearly so well as the Forest Elephants. The former drag the logs with their teeth, the latter by the aid of a collar round the neck, and are constantly in the sick list with sores and galls. The falling off in the profit returns for the past year is certainly large, but I have every confidence that a steady improvement will be the rule for the future. 1,345 planks having been cut this year, while it is estimated that 3,000 will be cut in the ensuing season.

3. I took charge of the Anamallai Forest from Lieutenant Beddome in the beginning of last September, up to which period about 350 planks out of the 1,500 estimated for, had been cut. I had at first some little difficulty in procuring axemen in sufficient numbers; but towards the close of the working season they came forward more readily, and I was thus enabled to keep the work going till the end of February, and so make up for lost time. The services of the eight Commissariat Elephants I was enabled to dispense with in the beginning of February. They had been chiefly employed in dragging out of the jungle such logs and planks as remained. These have now all been placed in Depot, and I do not think there is any more cut-timber now outlying in the forest.

4. One thousand three hundred and forty five planks for the Bombay Dockyard have been cut in the past season, and the whole of these have been brought to the foot of the slip, a distance of 15 miles from where they were cut, and are now being rapidly carted away to Mungarah in readiness for being floated down the river to Ponany. The value of the planks, including logs, heads, and butts, is Rupees 86,470-8-0.*

* I fear this amount will not be realised, it is far too high a valuation. H. M.

5. From the readiness with which axemen offered themselves for work latterly, and their assurance that they would all come to work in the ensuing season, I was induced to estimate for the cutting of 3,000† planks. A respectable native has also entered into a contract with me to deliver 500

† Many axemen have come forward this year. H. M

planks at the foot of the slip annually; and has deposited, as present security, Government Promissory notes to the value of Rupees 2,000. The planks are to be delivered on the above spot at the rate of one Rupee per cubic foot.‡

‡ This arrangement has not been approved of by me, the rate is too high H M

6. I consider that a saw-mill on the American principle, worked by water power; would be of great advantage, by the saving it would effect. The loss of good timber by the present rough mode of literally digging out the planks with an axe is immense. One saw-mill would not of course entirely supersede the use of the axe; but it would undoubtedly be of great service in converting into planks all the fine logs of timber now lying in Depôt on the road side. The best locality for erecting this mill would be on the banks of the stream, where this road crosses it about ¾ of a mile from Tunacadavú, that being the most central position with reference to the timber to be sawn, as well as the most convenient for superintendence. I estimated 600 Rupees for this mill, but that was only for the mere cost of putting it up, and adapting the stream to it, but does not include of course the cost of machinery.§

§ The establishment through fever cannot get through their ordinary work, a saw-mill would not pay. H. M.

7. The small experimental Teak plantation is now thriving pretty well, though at first owing to the failure of both monsoons, I was afraid that all the plants would perish for want of water, and some of them did.

8. Owing to proper precautions having been taken by clearing away the brushwood, &c., the periodical fires have passed through the Forest without doing any damage.

9. I have experienced much the same difficulty with reference to Mulser labor, as described by my predecessors. Some, eight or ten of them, were tolerably regular in their attendance as sawyers. They are not very good workmen at present, but are improving.

10. The present cart road has been extended between two and three miles further westward to enable us to cart away the timber when felled; and the whole existing road and slip has been repaired. I have also brought to the notice of the District Engineers of Coimbatore and Malabar the state of the two principal roads leading from the Forest. That from the foot of the slip to Mungarah, the floating station, and by which the planks are conveyed to the river, is much in want of repair. The other road which commences at the slip, and proceeds thence through the town of Anamallai to Pulachy, is in very good repair. There are, however, four nullahs in the eight miles between the slip and Anamallai, which require to be bridged. On account of the abruptness of their banks it is with difficulty, and at considerable risk to the bullocks, that large and heavy logs of timber can be carted across them. It is by this road that all the Rosewood logs, required by the Gun Carriage Manufactory, are conveyed, as well as such other timber as may be purchased by the Railway Company and others. The District Engineer of Coimbatore has informed me that he has instructed the Officer in charge of the Range to include these bridges in his estimate. I consider it to be of the highest importance that the approaches to the Forest should be kept in good repair, as of course the extension of the sale of Timber must materially depend upon the means of transport. The distance from the foot of the slip to the Railway Terminus at Coimbatore is 40 miles, and with the exception of the four nullahs abovementioned, is in good order.

11. While residing in the Forest, I twice made excursions to the river, which is the boundary between the Cochin and Madras Forest. It lies about 7 miles south of Tunacadavú.* About a mile from the cart road is the Anagundy pass, over which the path to the river leads. That portion of the Forest lying between the top of the pass (which has an elevation of some 600 feet,) is exceedingly rich in Teak and Rosewood of the largest size; as well as other useful timber. The sholas abound in Poon† and Dammer trees. This part of the Forest does not appear to have been ever worked, owing, I imagine, to the difficulty of removing timber after it was cut. It was my intention, this season, to have more fully explored both this part of the forest and the river above alluded to, to ascertain if it was practicable to float timber down it to the Cochin river, into which it flows. Could this be done, it would, I am sure, open up the resources of the Forest in a remarkable degree. I noticed many Teak trees measuring as much as 15 feet in girth, 4 feet from the ground. The finest timber of all kinds also grew in the vicinity of the river.

* My place of residence. J. B.

† Used for ships masts and spars. H M

12. Although it was duly advertised in the local Gazettes, there was no annual auction sale of timber at the foot of the slip this year, as no buyers were present on the day of sale, viz.

5th December 1860. This is the most unhealthy period of the year in that locality, and I proposed in future to have the sale of timber in August or September.

13. The past season has been a more than usually unhealthy one, owing to the want of rain, and all hands have suffered from it more or less. I took up my residence in the Forest on the 9th of September last, just as the feverish period was commencing. I did not leave it, with the exception of a few days, being compelled to do so by fever, and being at that time without medical aid, till the 20th November; and I then retired to Anamallai, eight miles off, where I remained till the 6th December, when I was obliged to quit, owing to a severe attack of fever, from the effects of which I am still suffering. My medical attendant has advised me to abstain from re-visiting the Forest until my health shall have been completely re-established, and has therefore, recommended my taking six months' sick leave. I regret very much, the being compelled to adopt such a course, as I had hoped to have personally carried out the estimate for the ensuing year, as well as various other matters connected with the working of the Forest, during the period of residence in it. I trust, however, that I shall be able to give such directions to the Officer who may be appointed to act for me, as will enable him to carry out the views which my experience of the Forest and its work, has taught me to be right ones.

14. The annexed statement shows the comparative quantity and value of Timber supplied to the Bombay Government in the year 1860-61, denoting the increase or decrease in the number of planks, quantity and class delivered, and the amount realised. The rates being determined by the Collector of Malabar, from their fair market valuation.

Comparative statement of Teak timber supplied to the Bombay Government for Dockyard purposes in the year 1859-60 and 1860-61, showing the increase or decrease in the number of planks, quantity and class delivered, and the amount realised in each year.

For the year 1859-60.									For the year 1860-61.									
Number of Planks.	Class	Quantity. Kolos.	B.	Y.	Rate per 100 Kolos	Amount			Number of Planks.	Class.	Quantity. Kolos.	B	Y.	Rate per 100 Kolos	Amount.			Increase. / Decrease
					RS.	RS.	A.	P.						RS.	RS.	A.	P	R.
311	1st	22,301	9	6	100	22,301	12	6	254	1st	19,363	3	4	75	14,522	7	3	
226	2nd	13,069	8	6	90	11,762	11	7	123	2nd	7,405	4	2	60	4,443	3	3	
305	3rd	13,713	11	14	80	10,971	3	0	108	3rd	5,171	10	13	50	2,585	15	3	
81	4th	3,155	1	1	75	2,336	5	0	55	4th	2,031	5	14	40	812	9	6	
23	5th	750	3	2	70	525	2	11	24	5th	744	4	6	30	223	4	11	
242	Inferior	11,899	8	6	40	4,759	14	0	92	Inferior	4,442	3	3	25	1,110	9	1	23,958-15-3.
1,188	...	64,849	6	3	...	52,657	1	0	656	...	39,158	7	10		23,698	1	3	

(Signed) J. J. BRINE, Captain,

Assistant Conservator of Forests.

APPENDIX B.

Administration Report of the Sigúr Forest, for the Official year 1860-61

1. Since I took charge in December 1860, the Curumbers attached to this Establishment have been employed in felling Sandalwood.

2. Six thousand rupees have been remitted to the Collector of Coimbatore, being money realised almost entirely by the sale of this wood. As the Government allowance during the past year was only 50 Rupees a month, this gives a clear profit of Rupees 5,400; besides having in store at Masnicóvil about 63 candies, valued at say Rupees 4,600, ready for sale. There being very few ripe Sandalwood trees in the vicinity of Masnicóvil of Sigur, I sent the

Curumbers in January to a place called Talamallai, where there is a good deal of Sandalwood of fine growth, but it being an exceedingly unhealthy place, I had to withdraw them last month.

3. At Talamallai there are 1,200 billets ready to be brought to Masnicóvil, but I experience some difficulty in procuring carriage.

4. The Curumbers are to be employed for the next two months in pruning and clearing young Sandalwood trees in the Sigúr Forest, after that they return to Talamallai. As stated in my report on the Mudumallai Forest, the Teak trees in the Sigúr Forest, are nearly all felled. I have, by your desire, sent to Nellambúr for two cooly loads of Teak seeds to be sown in some eligible site.

(Signed) W. A. GIB, Captain,

Assistant Conservator in charge of Sigúr Forests

OOTACAMUND, *9th May* 1861.

APPENDIX C.

Administration Report of the Mudumallai Forest for the Official year 1860-61.

1. During the first six months of the past official year, this Forest was worked for, and at the expense of, the Wellington Barracks; but it was placed under the Forest Department from the 1st November 1860. At the time of transfer there was a balance in favor of the Barracks, of Rupees 52,413-8-2. This amount must be liquidated by the supply of timber as required by the Barracks. In the past year 4,930 ¾ cubic feet of Teak have been supplied to the Wellington Barracks, and 3,832½ cubic feet of Teak have been sold in the market, realising Rupees 2,500-0-6, which have been remitted to the Collector of Coimbatore.

2. ROADS.—The Forest roads are, for fair weather roads, excellent, and have been originally most judiciously traced, but become heavy in the rains, and but little carting can be performed at that season.

3. CURUMBERS.—The Curumbers continue to work well and steadily but always require advances.

4. SAWYERS.—There are only five sets of Sawyers just now, and it is difficult to procure others even at high rates of pay, they suffer so much from fever.

5. ELEPHANTS.—One elephant died last month, there remain five; but one is very small and is to be sold as soon as a purchaser can be found. Besides our own Elephants there are four belonging to the Commissariat at present working in the Forest. I propose sending away these in about two months.

6. BUFFALOES, BULLOCKS AND CARTS.—A great deal of the carting is done by our own bandies. Without them the timber fellers would be a long way in advance of the carting, for although, one would suppose self-interest would be sufficient to induce the Bandy contractors to look after their own cattle, it is not the case; they neglect them sadly, and in consequence they fall off so much in the dry season that they can hardly get through any work. I may add that the past dry season has been an unusually dry one, in fact in February last there was hardly a blade of grass to be seen, and water failed in places where it had never been known to fail before.

7. FOREST.—The forest lease has now nearly two years to run, and according to the Orders of Government the timber is being stored at Musnigudi, where there is already 33,396 cubic feet. In the Forest we have 93,290 cubic feet lying about waiting to be carted to the Depôt, in all 1,25,830 cubic feet, much of which is of fine scantling, well-seasoned, and ready for immediate use. At the Ootacamund Timber Yard there are 5,522¾ cubic feet of Teak. The object being to get as much wood out of the Forest as possible before the expiration of the lease, it is worked during the unhealthy as well as the healthy seasons, unlike the Anamallai Forest in this respect, which is only and I believe, can only be worked in the healthiest season. Doubtless at some seasons there is great sickness at Mudumallai, and as there is no European Assistant or Overseer or medical attendance of any

kind, the whole of the supervision and prescribing for the sick devolves upon the Superintendent of the Forest, and those unacquainted with the working of a Forest have little idea of the difficulties that have to be encountered when fever breaks out and disables a large number of the Sawyers, Drivers, Coolies, Mahouts, &c.; but I am happy to say that since I took charge in December last there has not been more than the usual amount of sickness in the Establishment. The Mudumallai Forest is the only place that the Nilghiri Hills can be supplied with Teakwood from. The Sigúr Forest is well nigh exhausted, the price of Anamallai timber is too great, in consequence of the demand on the coast, and the Mysore Forests are too distant. It therefore appears that should the Madras Government contemplate erecting many buildings on the Hills, it will become a question for consideration, whether the lease of the Forest should be renewed or not. I am given to understand by Captain Farewell, Special Executive Engineer, Wellington, that should the proposed Jail be built at that Station he will probably require 40,000 cubic feet of Teak. This can be supplied from the Ootacamund Timber Yard and Musnigudi as required.

(Signed) W. A. GIB, Captain,

Assistant Conservator in charge of Mudumallai Forests.

OOTACAMUND, *9th May* 1861.

APPENDIX D.

No. 54.

To Captain H. R. MORGAN,

Officiating Conservator of Forests.

SIR,

1. In reply to your letter No. 458, dated 16th April 1861, I have the honor to inform you that as I have only had charge of the Forests for two months I am unable to give you further information than is contained in my last reports. No timber is supplied from the Wynad Forest (reserve) nor have any Forest improvements been effected for the bringing out of wood. This Forest of large extent has been partly traversed by me, and I am now on my way to Wynad to visit it again. The system of robbery and spoliation, I believe, is suppressed, and no Teak timber is now allowed to pass into Mysore without permission, nor is cutting Teak permitted. My peons by constantly patroling the Forest, its boundaries, and by watching the outlets to the East, see that these Orders are upheld.

2. The Mysore Forests are worked under the management of the Superintendent of Astagram Its conservancy is under me, and all irregularities are reported by me. I am now traversing these Forests and making arrangements for Teak Nurseries. A better description of cart to enable us to carry large logs will shortly be introduced. Hona and Muttee wood are now permitted to be cut in the Hunsúr Forest; and this season Teak alone will be cut in the Incor Maree Gudy Forests. Teak has brought a very good price this season at the Mysore Government sales. I beg to bring to your notice that it would be of the greatest advantage to the Mysore Government if the charge and collection of Sandalwood were placed under the Assistant Conservator; but this responsible duty could not be undertaken unless the Assistant's services were placed solely at the disposal of the Mysore Government for the purpose of looking after its Sandalwood and Forests.

(Signed) ALEXANDER HUNTER,

Officiating Assistant Conservator of Forests.

NUNGUNGODI, *30th April* 1861.

APPENDIX E.

CAMP DENKENCOTTAH, *2nd May* 1861.

No. 221.

To CAPTAIN H. R. MORGAN,

Acting Conservator of Forests.

SIR,

1. I have the honor to submit herewith my annual Report of the Salem Forests, for the official year 1860-61.

2. TIMBER.—The great demand for timber has been for sleepers for the Madras Railway; this has continued throughout the year, but not to so great an extent as it was for the past year. The demand for timber for house-building, &c., has been the same as last year, with a slight increase.

3. SLEEPERS.—I am glad to say there is a marked improvement in the supply of sleepers for the past year. In District six, the Engineer, Mr. Hoderstedt, informed me that he is receiving none but sawn sleepers; if this system could be introduced on the line, I have no doubt the sleepers would last a much longer time, and a better description of timber will be brought into the market. The present system of adzing the log into one sleeper must be very injurious to the Forests.

4. WOODS.—The description of timber now used for sleepers are Vangé, Ácha, Kulle Muddaray, Muddaray, Sál, and Shullawongee.

5. VANGÉ.—This wood is now becoming scarce. The best logs have been taken out by Wood-merchants for building materials, which fetch a much higher price in the market than the Railway Company are paying for their sleepers. I have known as much as a Rupee a cubic foot to have been given for a good log of Vangé.

6. ÁCHA.—This wood is very seldom used for sleepers on account of its hardness in resisting the augers, boring instrument, &c.; but the Natives are very fond of this wood for house-building and for decorating their temples. Several cartloads of this timber have been taken out of the Cottiputty jungles during the past year.

7. MUDDARAY.—This and Kulle Muddaray, both of the same genus, are very largely used for sleepers. A good supply of this timber can be had from the Cottiputty and Chittarey jungles. I have seen Muddaray trees in the Cottiputty jungles of seven feet in diameter, but these trees are very rarely selected by the wood-cutters.

8. SAL.—A small sprinkling of this timber is to be found in these jungles, but of a poor description.

9. SHULLAWENGEE.—All the Acacia tribe are well adapted for sleepers, but few of them attain the size required by the Railway Company.

10. TEAK.—This most valuable wood, I regret to say, does not arrive to any size in these jungles, there are cases of trees attaining to three feet in diameter, but these are very rare. On the Yellagiri, Javady, Chittary and Shevaroy Hills, thousands of saplings are to be found, and with little attention and care, these in a few years will be fit to cut into sleepers. The custom of the Malliallies in setting fire to the jungles year after year has destroyed many of these young plants, and others have been removed by wood cutters for spokes and felloes of wheels, as soon as they attain to any size. This year much has been done to put a stop to the jungles being fired.

11. SANDALWOOD.—Several thousands of young plants are to be found on the Hill ranges of this District; the yearly practice of setting the jungles on fire prevents great number of them coming to maturity, and those that are nearly fit to cut are removed clandestinely by Malliallies and others, and the billets taken into the North Arcot District. The head man of each village should be made answerable if any trees are cut in his range, this would to some extent put a stop to theft.

12. SATINWOOD.—All the best trees have been cut years ago, but there are thousands of promising young saplings coming on, and by strict vigilance I hope to be able to supply the wants of the Gun Carriage Manufactory.

13. Bamboos.—Immense quantities of fine bamboos are brought into Salem for Trichinopoly and other Districts, these are cut from the slopes of the Shervaroys and conveyed into Salem by carts and coolies. Others again are taken to the Railway stations of Tripatore and Vaniambady to be conveyed by rail to Madras and other large towns; these latter are cut on the slopes of the Javadies. Hitherto there has been no tax (except in one Talúq of this District) for this most useful produce of the jungles. I beg to suggest that a tax of 12 annas may be levied upon each bandy load of bamboos.

14. Firewood.—From 50 to 100 bandy loads of firewood are taken into Salem daily, cut from the surrounding jungles within 15 miles of the town of Salem. In Dr. Cleghorn's report submitted to Government for the official year 1859-60, it is there mentioned that a seignorage fee from 4 to 8 Annas a cart load is levied on this article in five Districts of this Presidency. As the consumption of fuel has been very great of late years in this District, I consider that a seignorage of 6 Annas per bandy load will be necessary for the preservation of the jungles.

15. General Feature.—Judging from the few sholas that are now remaining, and from the information that I have obtained from the Hill people, I should say there must have been some magnificent Forests in this District fifty years ago. The constant practice of Punacád cultivation by the Malliallies has a great deal to do in destroying the jungles, and where sholas formerly stood, you see now nothing but stunted jungle. The mode of renovating Forests by planting, in my opinion, will not answer in this District, on account of drought that is so much felt here, that to attempt to form plantations will be fraught with great uncertainty and loss to Government.

16. System.—A seignorage fee of one Rupee per bandy load is levied on all timber for house building materials by the Collector's Peons, and to those that wish to supply sleepers to the Railway Company the seignorage has been exempt, the consequence was the wood-cutters took advantage of this, and sold their sleepers in the market rather than take them to the Railway Company. I brought this to the notice of Dr. Cleghorn and Captain Morgan, and proposed to them making the wood-cutters pay the seignorage for their sleepers in lieu of the Railway Company, and also they should take out a license for not more than fifty bandy loads at a time, and pay the amount of 50 Rupees in advance; by this system the Collector's Peons are not required to collect the tax as formerly. Captain Morgan on his tour of inspection proposed the pre-payment system to Mr. Brett, and requested that I should be allowed to receive the tax and forward it on to the Collector's Treasury. This the Collector has concurred in, and from the 1st of March the new system has been introduced with satisfactory results. The returns for the past two months have been 1,150 Rupees.

17. Establishment.—At present my Establishment consists of one Overseer and 12 Peons. As there are five Talúqs and about eight outlets to each Talúq the present Establishment is quite inadequate to the wants of this District in conserving the Forests. This subject has been laid before Government by the Acting Conservator of Forests and the Collector, and it is unnecessary for me to go into details.

18. Rules.—A set of Forest Rules for the preservation of jungles in this District should I think be published in the District Gazette for the guidance of those that wish to cut Timber in these Forests. (*Vide* Appendix J.)

19. Denkencottah Forests.—These Forests have only just been made over to the Forest Department. I am therefore unable to give any opinion on them. One Overseer is in charge of these Forests, and the receipts for the past 3 months have been Rupees 738.

(Signed) L. BLENKINSHOP,
Asst. Conservator of Forests Salem.

APPENDIX F.

OOTACAMUND, 10*th May* 1861.

No. 8.

TO THE CONSERVATOR OF FORESTS.

SIR,

I have the honor to forward the usual Administration Report for the past year of the range under my charge.

2. Having assumed charge so late as the 26th January last, I am unable to furnish an account of extended operations of the work in this range.

3. The appointment is a new one, having only been sanctioned as recently as 2nd November last; the duties connected with it are,

1st. The Conservancy of the innumerable Sholas on the hills.

2nd. The planting of such of them as are cut down with quick growing trees adapted for fuel.

3rd. The arranging for the supplies of firewood and charcoal to the stations of Ootacamund, Wellington, and Coonoor; and,

4th. The oversight of the experimental Australian plantation near Wellington.

4. The first of the above, viz., conservancy of the Sholas, without the aid of the Revenue Authorities is an impossibility. I find that young saplings are being continually cut in Sholas, still the Forest establishment has never brought up any one for thus transgressing. The Burghers are those who are chiefly engaged in this illicit transaction, and as every nook in their neighbouring sholas is known to them, it is a most difficult matter to catch any one actually cutting or carrying away wood from the sholas. I would therefore beg leave to suggest that on my finding any young saplings cut in a shola, and reporting the same to the Collector, he be empowered to fine the Monegar of the Nado in which the shola is situated. This plan I feel assured would check the waste now going on. It may not be out of place to state here, that on my assuming charge, I learned that the Collector had established a rule that each Burgher requiring wood to build a hut was to pay a certain seignorage to Government for the wood cut down, but up to the present time I have not received one Rupee on the above account, though lots of wood have been taken away for building purposes.

5. Another cause of great havock is the annual burning of the grass by which many trees at the edges of the sholas are destroyed, for the prevention of this the Revenue Authorities ought to lend their aid.

6. As yet no young trees have been planted out, in consequence of there being none ready for that purpose, but I have started a Nursery in one of the sholas cut down by the last firewood contractor, which I think ought to furnish trees sufficient for planting this and another shola cut down by the same person. It must be evident that it is out of the question fencing in such large sholas, at the same time it is necessary that cattle should be kept out of recently planted sholas, and therefore I suggest that the Collector be empowered to fine the Monegars should cattle be found trespassing in the newly planted sholas after they have been warned to prevent them grazing in the neighbourhood of their sholas.

7. The supplying of Ootacamund with fuel for one year from 1st April last, was sold by public auction on the 12th March and produced Rupees 3,900, the purchaser being Mr. Wilson, who has permission to fell the trees in the western portion of the Governor's shola; the Contractor seems to be working very fairly, but a constant watch requires to be kept over his people to prevent them from cutting trees on the margins of the streams.

8. The contract for charcoal was made about a year ago, but owing to the Contractor cutting in spots where it was forbidden, his Contract has been annulled, and it was put up to auction on the 8th of this month, and realized Rupees 260 for the year The charcoal to be burnt in the same shola as formerly, viz. the Devy shola.

9 The contract for supplying firewood and charcoal for one year from 1st May to Wellington bought at public auction by one Moideen for Rupees 2,400, and would have produced more, but Colonel Woodfall who has been felling largely for a Coffee plantation in the vicinity of the Cunúr Ghát disposes of his wood to coolies at 6 Pics the load, who find a ready sale for it at Cunúr, which station is thus generally supplied I consider means ought to be adopted to prevent a recurrence of this. Coffee Planters prefer Forest land as better adapted for the growth of Coffee, and it is granted on the same terms as grass-land, but when they pursue the course of selling this wood as fuel, I think Government ought to fix a seignorage on every load carried out of the Plantation for sale.

10. I regret I am unable to give flourishing account of the Australian Plantation at Wellington, most of the ground planted appears to me ill suited for the purpose, trees which have been planted for three years and upwards are stunted, and parts of the ground have been planted two or three times without success I would recommend that instead of planting the whole ground, only such portions as seem suitable for the purpose be planted. I much fear that many years must elapse ere any return can be looked for. In one small portion of the plantation the trees are strong and healthy, it is a well sheltered nook with good soil. The money granted for the carrying on of this experiment is now nearly expended, and a further supply must be obtained if the plantation is to be continued. I subjoin what has been done in the plantation since November 1859, the date of last report

Twenty-nine acres have been planted with 35,000 young trees.

Three acres of ground are cleared, and part pitted and part trenched ready for planting.

About 20,000 seedlings are in the Nurseries ready for planting out.

A new Nursery is being established in a better locality.

Some 300 or 400 young trees fit for poles might be thinned out, but at present there does not seem to be a ready sale for them

The amount expended up to the 1st May, of Rupees 2,500 granted by Government, for which accounts have been made out, is Rupees 1,656, and a claim is preferred by the special Engineer at Wellington for about Rupees 600 on account of stores, &c., furnished a long time ago.

(Signed) J. H. M. BABINGTON, Major.
Assistant Conservator of Forests, Neilgherries.

APPENDIX G.

No. 374.

NORTH CANARA,
SIRCE, 27*th May* 1861.

From W. FISHER, Esq,
Collector of North Canara,

To CAPTAIN H. R. MORGAN,
Acting Conservator of Forests.

SIR,

1 In forwarding Mr. Muller's Forest Report for 1860-61, I cannot but think, that the financial results will be deemed satisfactory. We have not only a large income, but a large stock of timber also, though we can only show what has actually reached the Depôts.

2. I concur with Mr. Muller in thinking, that immediate attention should be paid to the reorganization of the Forest Department, on a scale commensurate with the work to be done and the revenue obtained from the North Canara jungles.

3. On this subject, however, I have appended a note to Mr. Muller's letter on the subject, herewith submitted.

4 I have no doubt that the Forest and Revenue Departments cannot be separated without injury to the interests of both, and it is a subject of regret to find, that the relations between them are not of as intimate a description as they used to be, when the Department was more immediately under the Collector.

5. I take the greatest interest in Mr. Muller's operations, having witnessed and been largely concerned in every step taken in Forest conservancy in this District, but it is otherwise with my subordinates, and the creation of a separate conservancy has led to a loosening of bonds, which, with Natives, is sure to take place when direct responsibility is removed, and room is given for Departmental jealousy, or the want of interest which is usually displayed by them, in all matters in which they are not personally concerned.

6. Under any circumstances, I would urgently press the immediate consideration of a scheme for re-organizing the Department, and therefore beg to call your attention to my remarks on what Mr. Muller has designated his private report.

7. Mr Muller's account having proved to be incorrect, has been returned to him for revision; but I need not detain his report, and will transmit the enclosure as soon as it has been received and examined in this Office.

(Signed) W. FISHER,
Collector.

To CAPTAIN H. R. MORGAN,
Acting Conservator of Forests.

SIR,

I have the honor to submit herewith my annual Report on the North Canara Forests.

I. FINANCIAL RESULTS—1. The enclosed Account Current show a credit of Rupees 2,53,149-2-8, and a debit of Rupees 78,394-7-1, thus leaving a balance of net profit of Rupees 1,74,754-11-7. This is the largest sum ever realized, but still there is nothing extraordinary that would call for remarks. The Account Current exhibiting but the actual cash transactions, cannot show the total of the business done.

2. The "Memorandum of wood unaccounted for" shows a stock of timber on hand of the estimated value of Rupees 1,54,006. This statement, though it shows the timber cut and conveyed to Depôts under the superintendence of the Establishment, cannot exhibit the total of our transactions. Several thousand candies of wood are cut annually as clearings from lands taken up for cultivation which are not in this account; there are also several thousand trees annually sold by auction in the Forest, all of which, when cut by the Contractors, have to be numbered and measured.

3. Annexed is a comparative statement exhibiting the proportion each Taluq has in the receipts and expenditure under the different headings.

4. The receipts under Teak are not so large as they had been in former years, but they have vastly increased under junglewood and clearings. The difficulties in conveying Teak from the Forests to the coast have also increased unproportionably, which will, however, be reduced when the project of clearing the Kalanuddy has been carried out.

5. *Clearings* from the cultivation lands form now annually a large item. Last year we had circa 20,000 pieces, containing about 8,000 candies which sold for Rupees 36,000 There are many places taken up for permanent cultivation, and the wood growing on such lands (mostly inferior) is now cut and disposed of by the Forest Department. This entails a vast amount of work and trouble, but in the end it is a well paying business.

6. The profit of the scignorage account is Rupees 6,323, which at 8 Annas per tree, to the residents of our District, gives 12,646 trees for local consumption. According to the new rule, all wood granted to residents of the District has to be paid for by the candy. Taking the above number of trees as the annual local want at 1½ candy each at the average of 8 Annas per candy, the realization would be Rupees 9,484. In the absence of more reliable data, it is too soon to build any calculation on the above.

7. *Bamboos* have given a profit of Rupees 4,658, which at Rupees 9 per 1,000 (average rate) gives about five lacs

8. Having reported on *firewood* of North Canara in my remarks on Rule 10 for the Coimbatore District, I have no further remarks to make.

II. Administrative Results.—1. It need scarcely be remarked that on account of the ready market for all kinds of wood our North Canara Forests desire the best attention. This fact renders the conservancy here much more difficult, and necessitates a much larger Establishment than in other Districts, where there are no roads or rivers, and consequently no such ready market. This, however, appears to me to have been much overlooked, else my recommendations with regard to the Establishment would have received more attention. I have only to refer to the fact, that the Establishment, fixed and temporary for the District, with all the allowances, costs only Rupees 11,770-15-11 whilst in 1859 and 1860, the fixed Establishment charges alone for the small portion of the Coimbatore District (Anamallai Forests) amounted to Rupees 12,230-8-6.

2. In North Canara it need scarcely be said that we want an extension of the Conservancy system, as it embraces already all kinds of trees. The greatest want is strong healthy and intelligent Overseers, who take an interest in the business. It is not affirmed too much, if I assert, that a few hundred Rupees more pay to the establishment would be a positive gain. I beg to refer to my private report on this subject dated 21st April 1861.

3. Plantation.—Up to this year our plantations have always failed, because, I could not give my time for this work, and had no one of the Establishment who could do the planting business. This season, a large piece of ground was prepared, seeds were sown, and thousands of them germinate every day, which in due time will be transplanted. The old seedlings of Teak and Blackwood thrive well.

4. *Coomry* grants have been much reduced this year and I hope we come gradually to the conviction, that a total abolition would in the end be best for the people as well as for the jungles. In North Canara it cannot be said that Coomry might be cut in certain parts where the jungles are not valuable, because all our jungles are valuable, if not now, they will be so in future. A single road passing through the jungles makes a vast difference. For instance, six years ago no one would have thought the timber on the Kyga ghat of any value (now all coomried by Malapur Bascarapah), but now, as the road over this ghat will soon be open, the wood so recklessly burnt for coomry would be worth lacs of Rupees.

5. *Cutch* was formerly extensively prepared for exportation; but, now cuttings have been stopped on account of the dishonesty of the Contractors. I have repeated applications for cutch trees, but I am as yet not clear under what rule to grant the cuttings. Whatever rule is adopted, people will cut 20 times the quantity allowed. I am inclined to try an export duty on prepared cutch.

6. *Land for Coffee* could be taken up in Supah Talúq. The ground is admirably suited and lies sufficiently elevated 1,200 to 2,000 feet. Most of the Natives in Supah have a few plants in their gardens, even the Coomry cutters whom I often advised to extend their plantations, instead of cutting coomry, but they will not. Now, as Beitkul will be opened, European planters ought to be encouraged to raise plantations, which, I think, would improve the Supah Talúq and its inhabitants, an impossibility so long as coomry exists.

9. Cotton.—Jungle land, 24 miles from the coast, has been taken up for cotton cultivation. The experiment is being carried out on a large scale, and from what I can judge, I believe it will succeed. The second crop came out with great vigour in these last hot months, and the plants retained their vitality. If this experiment is successful, thousands of acres of scrubby jungle land, unfit for rice cultivation, will be taken up, and be turned into cotton fields.

10. The great desideratum in our District is a Revenue survey, without which, a systematic Conservancy is an impossibility. It is utterly out of my power to know each of the many 100 of jungle places asked for cultivation, whether or not it would be advantageous to have them cleared or reserved, and as for the Establishment, if some of them are ordered to report on the piece of jungle applied for, it depends much on the amount of bribe or other influences which makes the Forests either valuable or not.

11. The close connection of the North Canara Conservancy with the Revenue Department renders it desirable in my opinion that this should not only continue, but that it would be better if our Department should, as it did before, form part of the Collector's. I ought to be an Assistant to the Collector and not Assistant Conservator, not that the official name makes any difference to us, but it does to our respective Establishments. Without the Collector and his Establishment

I would, in many cases, be unable to carry out my plans Should the Establishment form part of the Collector's as it did before, the Collector would have better means to promote deserving men of my Establishment in other Departments, or transfer such as would be better off some where else, or also reduce them if necessary. At present my Mutsuddies on a pay from 8 to 15 Rupees are condemned to this salary, there being no chance for promotion, nor could I reduce them if necessary, in this Department, the pay being already too low, and any reduction would only increase the amount of other pilferings, so extremely easy here.

12. The past year was one of great difficulty There is not a man of the Establishment, except myself, who has not been sick more or less. A great deal of work had to be executed by substitutes. The workmen also were nearly all sick and many of the works were retarded. Of the Contractor's coolies at Seiwapur and Kanery many were sick for a long period, 13 died, in consequence of which 47 men ran away to Mangalore. It is true, the North Canara jungles are healthier than many other Forests of the Presidency; but it is nevertheless a fact that many Europeans as well as Natives cannot stand living in our Forests.

SEDASHEGUR,
13th May 1861.

(Signed) S. MÜLLER,
Asst. Conservator of Forests, North Canara.

APPENDIX H.

MANGALORE, *6th July* 1861.

From J. FRASER, Esq., *Collector of South Canara.*

To CAPTAIN H. R. MORGAN, *Acting Conservator of Forests.*

SIR,

1. I have the honor to forward herewith the accompanying Statements, showing the transactions of the Forest Department, during the past official year 1860-61.

2. The revenue of the year under report amounts to Rupees 9,951-3-0, the greater portion of which is derived from Sandalwood stills. The increase from this source during the past year, as compared with the previous, is Rupees 4,294-15-2.

3. The revenue of the year under review exceeds that of the previous one by Rupees 4,409-5-3, as shown in the margin.

1860-61	Rs...	9,951	3 0
1859-60	,, ...	5,541	13 9
	Rs ..	4,409	5 3

4. The increased price obtained of late years for Sandalwood-oil, has attracted the attention of the merchants of the District who consequently made larger purchases than usual of Sandalwood in Mysore, and hence the increase in the number of stills.

5. The supply of fuel required for the use of the Stills, was regulated last year by the same rules, as were in force during the preceding year. On the sale of the present year's contract, however, the Sandalwood Still Contractors were told that they would have to pay for their firewood at 4 Annas per tree, the trees being marked and made over to them from time to time by the village Potails, who will be paid for their trouble by a fee of 2 Annas on the Rupee. Consequent on this arrangement, there will be a considerable decrease in the revenue under this head in future years, though there will be a proportionate increase under that of seignorage.

6 The increase of Rupees 160-13-4 in the revenue under the last named source, arises from the growing demand for timber both in the District and in the town of Mangalore.

7. As regards charcoal used by iron smelters, they have made the same hitherto without any payment. It has been determined that in future they shall pay a seignorage of 6 Pice for each mura of charcoal they prepare, of which 2 Pice will be given to the village Potails to encourage them to keep a strict account of the amount used.

8. It is proposed in the coming season to commence plantations of both Teak and Blackwood, with this view, supplies of seeds have been written for both to Malabar and North Canara. It is also proposed to sell a quantity of rejected Teak which is now standing and only going to decay in the Suliah jungles, and a number of Poon trees, a few fit for 2nd and 3rd class spars, but

the majority fit only for boats. From these two sources there ought to be a net return of at least 3,000 Rupees, but to enable the Department to secure this income, and perfect the planting and pruning operations which are contemplated, the sum* already allotted for the South Canara Forest expenditure should be increased by 1,000 Rupees, and I solicit your aid in procuring sanction for this additional sum.

* Rupees 2,000, Government Proceedings dated 16th April 1861, No. 848.

(Signed) J. FRASER,
Collector.

To CAPTAIN H. R. MORGAN, *Officiating Conservator of Forests.*

SIR,

1. In compliance with the subject of your letter No. 459 of the 16th ultimo, I beg to forward the following Report on my proceeding, during the official year 1860-61.

2. SUPPLY OF TIMBER.—I cut no timber, I merely mark the trees and then they are given out to merchants who pay a seignorage of 6 Annas per candy, on as many candies as they think they can cut and bring down to Mangalore in one season. During the year, there has been seignorage paid on 3,128¼ candies which amounts to Rupees 1,173-3-0.

3. BAMBOOS.—These are given out to the merchants also on payment of a seignorage of 8 Annas per 100. During this year there was 1,85,608 bamboos cut. The seignorage on which amounts to Rupees 928-0-8.

4. CONFISCATED TIMBER.—Under this head I have placed the timber that was cut and left behind by the merchants last working season. Of this timber we had 263¼ candies, the auction price of which amounted to Rupees 541-11-0.

5. BOATS.—The timber merchants are allowed to make boats of jungle wood for the purpose of carrying their provisions, a store of which they have to take with them down the river for themselves and coolies. They are charged 3 Annas per running foot on all boats that they cut. There were twenty-one boats cut this year, the seignorage of which amounts to Rupees 76-11-0. The name of the wood chiefly cut for boats is Doope,† it is a soft wood and is fit for nothing else. A boat made of it will last in salt-water for five or six years, but it would not last over two in fresh water.

6. SANDALWOOD STILLS.—There were 594 Stills at work, the revenue of which amounts to Rupees 5,037-4-0. The stills are all erected in the Udipy Talúq along the foot of a range of hills known as Ander Ghat. The soil is poor in this locality and the jungles inferior. A good tree of any kind being seldom met with, but even if there was good timber in this part, it is too far from the river, and the present market value of jungle or common wood, would not pay land carriage.

7. ENGINEER'S DEPARTMENT.—During this year their supply amounted only to 10 candies of jungle wood and 3,108 bamboos, and as they cut the timber and bamboos themselves and paid the usual seignorage on them, the amount is included in that of timber supply.

8. FIREWOOD.—This still continues to go into the market free of duty, and without an Establishment or a constant watch on the roads and rivers in the District it must continue to do so. In the beginning of the year under review, I got an offer for a contract* to supply the town of Mangalore with firewood, but when the time came for making it, the man did not appear, so there was no contract made. His reason for not taking it, I am unable to ascertain. I have not seen him since; but I rather suspect he was frightened out of taking it by others who knew, that if a contract was once made for firewood, it would put a stop to bringing it in free.

* This is the contract alluded to by J. Fraser, Esq., in his annual Report on South Canara Forests, for the year 1859-60 H. M.

9. TIMBER SUPPLIED TO RYOTS BY POTAILS.—I am unable to say any thing under this head, as I can get no information from the Tahsildars or Potails. On my annual tour through the jungles I call on the Potails to show their books; but the answer I invariably get is, that they are sent to the Talúqs, and if I write to the Tahsildars, they do not answer my letters, or if by chance I get an answer, it is to say that they have no time to attend to the subject of my letters;

† Vatena Indica.

so, between the Tahsildars and their Potails, I am kept perfectly in the dark concerning the working of the above system; but, as far as I can understand from other sources, the system is not working well. There is a quantity of timber cut in the year under this head, but I am led to believe the money received is very little.

10. Charcoal.—No person in this District seems willing to make a contract for the supply of charcoal. The town of Mangalore is supplied from the Malabar jungles.

11. Blackwood Contract.—In the beginning of the year there was a contract entered into with A. J. Saldanha, to cut and bring to the coast 1,020 trees of Blackwood, and as he had to girdle, cut and prepare the logs for the market, the time allowed him was three years and six months. He has failed in his agreement, and the Collector intends to hold him responsible for any loss that may arise by the re-sale of the contract. The fact is, he bid too low, if he fulfilled his contract, he would lose at least one Rupee in each candy, he sees that now, and considers the first loss best (*i. e*) the loss of his deposit money.

12. Pruning.—The following abstract table will show the number of trees pruned and registered during the working season in the Súliah jungles.

Abstract.

Teakwood.		*Blackwood.*	
Young trees	976	Young trees...	249
Saplings	6,402	Saplings...	348
Plants...	38,462	Plants...	54,478
Rejected trees	2,122	Rejected trees	17
		Ripe do.	38
Total..	47,962	Total...	55,130

Of the rejected trees in the above table, some are partly burnt, some are broken by the fall of larger trees and some are old and hollow. None of them will improve by standing any longer, and as we have no teak of any kind in the market, I intend to have them cut and brought to the Coast, either by my own Department or by contract. I have seen the greater part of those trees myself, and I am of opinion that their average measurement would be about one candy a tree.

13. The expense of pruning the above number of trees amounted to Rupees 333-14-7. Pruning is now stopped as the coolies are all employed in field labor. The larger half of this jungle has yet to be pruned; but the cooly labour will not be procurable before January next. The Duffadar and three Peons that were appointed to look after the pruning of this jungle (with the sanction of the Collector) kept on the strength of my temporary Establishment, as I think it advisable to have some one to look after this part of my range. My other Duffadar and four Peons being fully engaged with the timber merchants, have no time to spare, so that if the Duffadar and Peons at present in it were discharged, it would be left to itself as formerly, and my annual visit is not sufficient to conserve it, especially as I get no assistance from the Talúq authorities.

14. Planting.—I have got some excellent planting ground along the banks of the Pinaveny river (Súliah), but the want of assistance has prevented me from doing any thing yet. In January last, the Collector ordered the Tahsildar of Pútúr to gather some Teak seed* with the view of having some nursery beds formed; but it was found after the seed was gathered that it was all bad; before this was found out, the time for gathering more seed was past, so it had to be given up for this season.

*Should have come from Nellambúr H. M.

15. I have now touched upon all the points connected with my Department, and some of them are unsatisfactory enough; but, it must be borne in mind, that I have no assistance whatever. I have to do everything and see everything myself, and Talúq authorities being jealous of their authority, make my operations, if possible, more difficult than they otherwise might be.

16. The whole of the timber and bamboos brought down this year, I had to measure and count with my own hands, and at the same time I had to superintend the pruning of a jungle thirty miles distance from the place where timber was measured.

17. In conclusion, I have to state that I have met with every possible assistance from J. Fraser, Esq., the Collector. He has several times issued orders to the Talúq authorities, but they always found means to delay their fulfilment or to avoid them altogether.

(Signed) E. THOMPSON, *Overseer,*
Forest Department, South Canara.

UPARANGODY, *9th May* 1861.

APPENDIX I.

MADURA.

1. I have the honor to submit the following brief Report of my operations, together with the annual accounts of the Madura Forests for the official year 1860-61, countersigned by the Collector of Madura.

2. In July 1860 the system of selling full grown standing trees in Government Forests was brought into force with the Collector's approval as a temporary arrangement. The rate being 5 Rupees for Teak, Blackwood, Vongé and Anjelly, and for the tops and butts 2 Rupees per bandy load. All other kinds, such as Puluchee, Kusturee, Kungilium, Veckalee, Karungalee, Kadumbai, &c., 2 Rupees per tree, and when taken by the bandy load one Rupee. Provision was made in the case of *bonā fide* Ryots to cut what agricultural implements they required free of charge from among trees of an inferior or stunted sort, such as Odusally, Munjanatty, Vulkai, and Ussil; and such of the first mentioned trees as were clipped, hollow or stunted were sold at 2 or 1½ Rupees each, and those of the last mentioned kinds if found in similar condition at half a Rupee each.

3. By this arrangement a considerable amount of timber for building purposes was cut during the year, and I may say is increasing in demand. I have granted 292 licenses for permission to cut 1,035 bandy loads of timber, the seignorage fee is invariably collected by the Officers of the Forest Department, by whom also the trees are marked and given over to the purchasers without the least inconvenience.

4. The trees marked were mostly Vongé, Teak, Blackwood and Vaugé. The first two mentioned trees are in great demand in the District as the Natives value them very much; but I regret to state, that the method of felling is without judgment and great waste of timber is the result; thus for instance, after a tree has been marked by the Forest Establishment and delivered over to the purchaser who is generally a wood-cutter, the axe is laid one yard and a quarter from the ground, while others waste by hacking over a broad surface. I believe this is owing to the want of trained wood-cutters, as felling and squaring timber have never been made a constant employment by Natives in the District.

5. It is remarkable that stunted (in some instances young) trees and small pieces of wood easily removed on carts sell the best in proportion; the reason of this is, that the unskilled wood-cutters are unable to split up the larger trees into joists. This is one disadvantage of the present system of granting licenses for felling trees, as it leads to the destruction of young trees while the larger ones are left standing. Another disadvantage of the present system is that the forests are not worked in succession, as the applicants are allowed to cut and convey timber from the Forests nearest to the village, hence the Forests on the North and South face of the Pulni hills and in the Cambam valley are constantly worked. The only method I can see of preventing this is, that the Amani system now pursued in the other Forest Districts should be adopted immediately in this District also, and the sale proceeds of the timber will then undoubtedly increase and Government derive a paying revenue from these Forests. For although the Madura Forests are of considerable extent, it is of the utmost importance to preserve those finer portions which are easily worked.

6. So far as I can judge, about 3 to 4,000 logs of sizes will be required to supply the annual demand of the bare country to the eastward, and in the event of the Amani system

being introduced into this District, it should be one of the principal duties of the Forest Department to regulate the felling with a view to this permanent demand and the prospective requirements of the G. S. I. Railway from Salem through Carúr to Madura will probably oblige us to indent upon the Cambam Forests. I propose to form Depots at the following places. Balasamuthrum, Virupátchy, Periacolam, Cambam and Nattam (see Trigonometrical map) and should Government take the managment of working the Forests under the Amani system, I believe one or two Elephants would prove economical in dragging logs of great length from the hills which are in great demand and which cannot otherwise be managed.

7. Besides the supply of timber for buildings purposes, a considerable number of bamboos were cut by traders during the year on the Virupátchy hills (North face of the Pulni hills) where alone they are found in great numbers. I granted 270 licenses for felling 40,722 and thus realized Rupees 272-3-10, the tax being 1 Rupee per thousand, and 8 Annas for the smaller sort.

8. Since the discontinuance of the renting of the Forest products such as gums, dammer, honey wax, fruits and leaves in medicine; great depredations are committed in the Forests in collecting them clandestinely by those persons who formerly rented them from Government. Thus in collecting fruits and flowers, branches of trees are brought down, barks of trees are entirely stripped off, and such careless treatment of trees cannot be checked by the present small establishment I am now allowed. I would suggest that the old plan be adopted, as it would not only be a source of revenue to Government, but the renters would be made responsible for any destruction that might be committed in the Forests. I am of opinion that should Government take the control of working the Forests, it is desirable that the Forest products should also be collected and disposed of by them.

9. The prohibition of Coomree cultivation so much practised in former years in this District is a perfect success. I would propose that permission to cultivate a new field should in every instance be obtained from the Revenue authorities after the spot has been inspected by the Forest Officer in charge.

10. As the new settlement of Kodakanal is rising into importance and the number of visitors is on the increase, I have been obliged to lay a seignorage fee of 5 Annas per cart load of wood cut for fuel in the Kodakanal shola, the amount realized has fully covered the expense of keeping up a Peon for the preservation of the shola.

11. It is remarkable that no notice has been taken up to this time of the Sandalwood jungles on the Pulatur hills I have on more than one occasion visited these jungles ; most of the larger trees have been cut and taken away clandestinely and the young plants are now very numerous ; a few, however, are large enough to be cut up and prepared for sale. Vigilant supervision is absolutely necessary to preserve them from fire, creepers and smugglers, as the larger trees are daily lessening.

12. In conclusion, I have the honor to remark that the Establishment now sanctioned for this District is almost too small to carry out systematic conservancy. The services of an English writer would be necessary to attend to accounts and other duties which would otherwise devolve on me. The newly discovered Sandalwood jungles on the Pulatur hills should immediately be conserved as an addition might accrue to Forest revenue of the District.

(Signed) E. SPERSCHNEIDER,

Overseer Madura Forest.

APPENDIX J.

Rules for the Conservation of the Salem Jungles.

1. No license to be granted for less than twenty-five bandies. The money to be paid in advance. The time allowed in each license to be limited to two months.

2. The license and tickets to be shown when the carts pass the Tannah stations. Each piece of wood to be marked by the Peons, and the number of bandy loads to be entered on the back of the license.

3. If Satinwood is cut, the Department Peons to point out the trees. The seignorage on this kind of wood to be 3 Rupees per bandy load.

4. Ácha maram, Vellé Naga, Vengé, Maddoe, Kul Maddoe and Blackwood, to be charged 2 Rupees per bandy load

5. The license to specify the name of the wood to be cut.

6 No wood except Satinwood to be felled when the tree is less than three feet in circumference, at three feet from the base.

7. Peons to proceed with the wood merchant and mark the timber when practicable.

8. The charge for firewood to be 6 Annas a bandy load.

9. Bamboos to be charged as follows,:—

A bandy load of bamboos of the larger kind, termed in Tamil, Valai, 12 Annas the load of forty-eight. A bundle of bamboos of the smaller kind, termed in Tamil, Mungil, 6 Pice, per bundle.

10. Persons requiring to cut bamboos to take out a license.

(Signed) H. R. MORGAN, Captain.

Officiating Conservator of Forests.

SALEM, *7th June* 1861.

APPENDIX K.

No. 352.

DENKINCOTTAH, *1st February* 1861.

To THE SECRETARY TO THE BOARD OF REVENUE,

Fort Saint George.

SIR,

1. With reference to the request of the Board of Revenue conveyed in their Proceedings No. 329 of 18th January 1861, as to "how far it is now desirable for Government to obtain, from "the North West Provinces, a few skilled Tea manufacturers, in order to test as fairly as "possible the merchantable character of the leaf as produced in those localities of this Presidency "where the cultivation has been tried, and plants now exist," I have the honor to offer the following remarks :—

1st. To ascertain the market value of the Tea grown on the two plantations of Messrs. Mann and Rae, is of the utmost importance, as until that question is settled, no extension of Tea planting can be looked for.

2nd. As far as a knowledge of the soil, climate and situation can enable one to judge, I am of opinion, that Tea at least equal, if not superior to the Assam Tea which sells for 2 Rupees per pound in the market can be produced. But Tea equal to the Kangra Tea which fetches Rupees 3-8 per pound on the spot, cannot well be produced for the following reasons :—

I. Kangra is in latitude 32° north, and at an elevation of some 2,000 feet above the sea. The best Tea grown in China is at an elevation of 2,000 feet above the sea, and 29° to 30° north.

II. Ootacamund is but 12° north, and allowing 2° northing for every 1,000 feet of elevation, 6,000 feet the best height for the cultivation of Tea (as above that elevation the seed does not ripen) gives 24° north latitude, a little under the mark ; but some allow 3° north per 1,000 feet of elevation, if that is allowed, we have a Tea plantation on the Neilgherries at 6,000 feet elevation, equal to 30° north, or the situation most suitable.

3rd. When I was on the Shevaroys in January last, I saw a few Tea plants in Mr. Richardson's Coffee plantation ; but these were quite unfit for the experiment, neither do I think the soil or climate suitable for Tea.

4th. I have taken advantage of paragraph 3 to bring to the notice of the Board, the great difficulty that exists of obtaining land on the Hills for the purposes of Tea planting. At present nearly the whole of the Hills at an elevation of from 5 to 6,000 feet is practically held by the Burghers under the more than dubious title of what is called a grazing pattah. Let a settler make application for land in the neighbourhood of a Burgher village; and the land, though it has not been cultivated for years, is immediately claimed by the Burgher village, and a preposterous sum per acre demanded; if the demand be not acceded to, a complaint is lodged and the land pronounced to be Burgher land. I have had personal experience of this, and unless some remedy be devised, the obtaining of manipulators will be quite useless, as under the present rules, land suitable for Tea being unobtainable, colonisation is impossible.

(Signed) H. R. MORGAN, Captain.

Officiating Conservator of Forests.

APPENDIX L.

REPORT *on the Government Botanical and Horticultural Gardens at Ootacamund for* 1860-61.

In submitting this Report, it gives me much satisfaction to be able to state, that considerable progress has been made in the Gardens during the past year. The upper portion of the lower Garden being recently improved by the formation of lawns, flower beds, walks and bowers; while in the upper portion two terraces, and one parterre has been added, and thus gradually year by year, the Gardens steadily progress towards completion.

The Quinine yielding Cinchonas from Peru, introduced by Mr Markham, form the most valuable addition ever made to our Gardens. At the present time we have upwards of 4,400 plants in very promising condition, and more seedlings daily germinating. Many of the imported plants are from 2 feet, 10 inches to 3 feet 2 inches high, and some of their leaves measure 14¼ by 10 inches. The average monthly growth of these plants, being about 3 inches, while the maximum growth made by the most luxuriant shoots since their introduction (five months) has been 18 inches, which gives a monthly growth of upwards of 3½ inches; but some of the shoots have grown 8 inches during the past month; while during the first month, they scarcely grew any, as they were checked by being transplanted out of the Wardian Cases; in fact, some of the plants have only recently fairly recovered from the disease and damage contracted in the Cases, and from the effects of being transplanted in a weak state. Therefore it may be expected that the four months yet to come of the growing season, will produce a greater average growth than that recorded above. The first of our seedlings are from 8 to ten inches high, and 9 to 13 inches in diameter across the leaves. The average growth of the seedlings being about 2 inches per mensem, the maximum growth made by the most vigorous plants being 3¼ inches.

Plants introduced	
Cinchona Succirubra or red bark ..	2,361
Cinchona Calisaya, Calisaya bark	6
Cinchona Nitida, genuine grey bark .	840
Cinchona Micrantha var, Provinciana.	905
Cinchona Peruviana or Patu de Gallinazo	42
Species without name.....	298
Total Rupees..	4,452

The above is the total number of Plants on the 9th September 1861

The Orders of Government of the 3rd July 1861, having placed this undertaking under my superintendence, with an efficient Establishment; the Cinchona operations and progress will in future form the subject of a separate report. Various and conflicting recommendations have been laid before Government, with reference to the cultivation of these plants. On looking over the correspondence, I find I have omitted to explain the facts, which have led me to form an opinion in some respects, different from others, with reference to the description and amount of shade required by the plants in cultivation. Many of the travellers on the Andes, while passing through the Cinchona forests, and observing the trunks of the Quinine trees, under the dense shade appear to have lost sight of the fact, that their leaves and branches having overtopped the forest, were exposed fully to the influence of light and air. The leaves are the laboratory in

which the Quinine is formed, and their true position in the natural state of the plant should form the subject of our enquiries. The trunk-bark being merely the repository, its position is unimportant. The following facts induce me to believe, that the leaves and most of the branches of *every* tree which produce Quinine on the Andes, overtops the forest. Von Tschudi, the eminent German traveller, gives the following account of the method by which the Bark collectors discover the position of the Quinine trees. " In the loftier districts of the forests, the Peruvian bark is found. In May the Indians assemble to collect bark, for which purpose they proceed to the Cinchona forests. One of the party climbs a high tree, to spy out the *Manchus* or spots where there are groups of Cinchonas. He is called a *Cateador* (searcher). It requires great experience to distinguish the groups by the tints of their foliage. The *Cateador* then leads the party through the almost impenetrable forest to the group." " Weddell, Poeppig, Karsten, Markham, and other writers on the subject, mention the Cinchonas being discovered by the " hues of their foliage," thus the leaves must overtop the forest, or they could not be seen." Mr. Cross in his notes on the red bark states, " I observed that many of the " red bark" trees, when growing under dense shade, lost a portion of their branches, and sometimes all of them during the wet season, or if not, they assumed a weak climber-like habit, which ; if exposed, suddenly at any time to influences of a damp or drying nature, would be likely to cut them off altogether." From these quotations it appears that to secure the existence of the plant requires it to overtop the forest trees to obtain light and air, and Physiology teaches that this is especially necessary for the production of Quinine. Thus it appears that the advocates of *dense* shade, are not borne out either by observation or first principles. I am of opinion that *partial shade* would facilitate the growth of the young plants, by affording them shelter and preventing the heat of the sun from parching and hardening the soil ; but, at present, I feel quite unable to say, what description or amount of shade could be employed with greater advantage. Experiments have been commenced with the object of testing this important point. I consider perfect *shelter* to be very necessary.

In this report it may be expected that an outline of the method to be pursued in cultivation, should be given ; but, I regret, that, at present, I am not in a position to give this with any degree of correctness. I, however, may mention that we propose to put in the plants at 8 feet apart ; and when the trees become too crowded, a certain number will be cut away to afford bark, and give space for the others to attain full size. I would not recommend that the trees left to form the plantation should at any time be cut down for their bark, but that a system of removing alternate branches be adopted instead. The removal of the first pair of branches will probably take place the third or fourth year after planting, and this to be continued until the sixth year, on the seventh year, the new branches formed, where the first were cut off, can again be removed, by this time the tree will have attained a good size, and probably formed from 20 to 30 pairs of branches ; thus the pruning off of alternate branches, will therefore progress yearly up the stem for ten or fifteen years, and this would give the branches sufficient age to attain a diameter equal to small trees, and these branches when cut will produce a large proportion of " trunk bark."

In removing the branches, they should be cut off at about a foot from the main stem, in order to give space for the formation of new branches, which would immediately shoot as the Cinchona possesses great power in rapidly developing latent buds.

By this mode of treatment, it appears to me, that a very great advantage will be obtained over that of cutting down the trees ; because this would give a constant and yearly increasing supply of bark, without injury to the trees ; as at no time would they be deprived of so many branches as would effect the formation of roots, or check the growth of the tree.

Of other plants introduced from Peru by Mr. Markham, I may mention the Cherimoyer, an excellent species of Custard Apple the Schinus Molle or Mastich gum tree, and three varieties of the Aju or Peruvian Peppers. All these are progressing satisfactorily.

Another very important introduction is the green-dye plants from China. In April last I received from the Secretary to the Board of Revenue six plants in good order ; namely, four plants of the large variety, and two of the small. All are thriving well, and appear suited to this climate.

Of ornamental plants, the most important are the varieties of variegated Begonias, brought out by Mr. Dawson, and a few new species of Australian shrubs.

FINANCES.—Table A. Appendix exhibits the financial position of the Garden, on the 30th April 1861, of which the following is an Abstract :—

The amount of receipts being

	RS.	A.	P.
By Seeds and Plants sold	1,624	12	0
„ Government allowance	1,200	0	0
„ Superintendent's salary	2,400	0	0
„ Pay of Apprentice and writer for August and September 1860.	70	0	0
Rupees...	5,294	12	0

The expenditure during the same period, being

For Contingent expenses	496	0	8
To Garden Establishment	2,099	2	8
„ Superintendent's salary	2,400	0	0
Excess of receipts over expenditure	299	8	8
Total Rupees..	5,294	12	0

Table B, shows the distribution of plants, seeds &c., for the official year ending the 30th April 1861.

The total number of Fruit trees, and Fruit bearing shrubs.

Distributed during the year, being...	196
Timber trees..	5,589
Shrubs and Flowers..	2,745
Total No. of plants...	8,530

and 231 collections of seeds, making the total value of plants, seeds, &c, sent out from the Garden during the year... ... ... 2,676 6 4

The amount of this sum realized being...	1,624	12	0		
Amount presented to the Ootacamund Improvement Committee. Vide Order of Government dated 24th November 1860, No. 2,223, paragraph 7..	171	3	0	1,795	15 0
Leaving a balance still due to the Garden, on the year's transaction of...				880	7 4
Total Rupees...				2,676	6 4

In the above, the allowance for the Writer and Apprentices not having been received for many months, has consequently not been brought either to debit or credit on the accounts.

In the official year ending 30th April 1860, the total value of plants, seeds &c., sold from the Garden was Rupees.. ... . 1,809 6 0

The total value of the same for the present year, being.. .. ... 2,676 6 4 which gives the very satisfactory result of an increase of more than one-third.

CONSERVATORY.—The Conservatory sanctioned by Government in 1856, is still unfinished. The amount of the supplementary estimates having (I believe) been expended without completing the work. This is to be regretted, as much of the space in the building cannot at present be used, owing to the leakage from the roof. I have pointed this out to Captain Farewell, the Engineer of the range, and trust the work will shortly be completed.

SEEDS.—The seeds produced here last year are of inferior quality, owing to the extreme drought of last season, the plants did not attain maturity, and consequently produced imperfect seeds.

HEDGES.—The weeping willows have been planted to form hedges in the ornamental part of the Garden, they have also been used to form borders round large flower beds being placed in this manner. These have been found to grow readily, and it is anticipated they will form good borders as well as fences.

APPRENTICES.—The progress of the Apprentices has been most unsatisfactory. The amount allowed being insufficient to induce other than boys of 10 or 11 years of age, to accept the employment; these boys having received an imperfect education at school, think of nothing but play and destruction, and upon whom any attempts to teach, have been thrown away, as it is impossible to make them take an interest in their employment. I would therefore suggest that instead of European and East Indian boys being engaged as Apprentices, that two of the most intelligent and deserving of our Native Gardeners be promoted to Apprentices on the scale given in the margin; these men would carry out carefully and faithfully the instructions they received and therefore would be very useful during their Apprenticeship, and as only men who took an interest in their employment would be promoted, it is likely they would become very useful.

Proposed Scale.

1.	European or East Indian Apprentice..	20	0	0
2	Native Apprentices at 7-8-0 each..... ..	15	0	0
		35	0	0

Present Scale.

1.	European or East Indian Apprentice.. .. .	15	0	0
2.	do. do at 10 each	20	0	0
	Rupees .	35	0	0

This arrangement would naturally cause emulation among the Garderers in our Establishment for to merit promotion to Apprentices; and, I think, would be productive of good results. I therefore, trust the Government will sanction the proposed scale, as it incurs no additional charge to the State.

The salary of 20 Rupees per month for an European or East Indian Apprentice, would be sufficient to procure a boy with a fair education and some intelligence; and 7½ Rupees for a Native Gardener would be sufficient to induce the best men that can be had to accept the employment.

In concluding this Report, I beg to tender my thanks to Dr. Jameson, Saharunpore, for numerous valuable Himalayan seeds. To Captain Morgan, Officiating Conservator of Forests, for plants of the Wellingtonia Gigantea and Cryptomeria Japonica. To Messrs. Veitch, of the Royal Exotic Nursery, London, for many ornamental plants gratuitously presented to this Institution

(Signed) W. G. McIVOR,

Superintendent Botanical Gardens.

GOVERNMENT GARDENS, OOTACAMUND,
17*th September* 1861.

APPENDIX M.

Dr. Livingstone's remedy against Fever.

"A pill composed of three or four grains of Resin of Jalap, three or four of Calomel, an equal number of Quinine, a drop or two of Tincture of Cardamoms to dissolve the Resin, and Ginger or Cinnamon to form the bolus."

"It ought not to purge, the quantity of Resin must be regulated to produce only a gentle movement, which when felt, is accompanied by perspiration and sound sleep. A check to this perspiration has, in my own experience, given rise to vomiting of large quantities of pure blood."

Copy of Mrs. Livingstone's letter.

"We make a pill of equal parts of Resin of Jalap and Calomel, Rhubarb and Quinine, say, for a powerful man, eight grains of Resin of Jalap, eight grains of Calomel, four or six grains of Rhubarb, and four or six grains of Quinine, make the whole into pills with Tincture of Cardamoms. This relieves the very worst cases in a few hours. We then give Quinine till the system is affected with Cinchonism. The Calomel removed at once from the system, and curiously enough, decreasing doses serve. In some of us half a grain of the mass produces as much effect as twenty-four grains did at first."

(True Extract and Copy.)

(Signed) H. R. MORGAN, Captain,

Officiating Conservator of Forests.

APPENDIX N.

Directions for the treatment of Teak seeds.

Select seed from the finest and largest trees in November or December when ripe, keep the seed dry till the first showers in April, prepare your seed-beds, soak the seed 48 hours in cold water, then place in a heap of rotten leaves for forty-eight hours more, then plant out in beds at two inches apart covered with half an inch of earth, the beds to be covered with a small quantity of straw to be watered morning and evening; the plants come up about the fifteenth day. In July when the heavy rains commence, the plants should be taken up carefully (the tap root should not be injured) and planted out in holes in loose soil 15 inches in depth and at 6 feet apart. Care should be taken not to plant them out except during the continuance of rain.

(Signed) H. R. MORGAN, Captain,
Officiating Conservator of Forests.

TABLE A.

Account of Receipts and Disbursements of the Horticultural Gardens at Ootacamund, for the official year ending 30th April 1861.

			Rs.	A.	P.	Rs.	A.	P.
1860	May... ...	To Cash paid for Contingent expenses.	51	0	0			
,,	,,	Do. Garden establishment.	137	7	0	188	7	0
,,	June.. ...	Do. Contingent expenses.	43	4	0			
,,	,,	Do. Garden establishment.	123	7	6	166	11	6
,,	July... ...	Do. Contingent expenses.	82	0	0			
,,	,,	Do. Garden establishment.	116	3	4	198	3	4
,,	August. ...	Do. Contingent expenses.	18	4	0			
,,	,,	Do. Garden establishment.	160	0	8	178	4	8
,,	September...	Do. Contingent expenses.	1	4	0			
,,	,,	Do. Garden establishment.	269	4	8	270	8	8
,,	October. ...	Do. Contingent expenses.	8	0	0			
,,	,,	Do. Garden establishment.	202	9	6	210	9	6
,,	November...	Do. Contingent expenses.	66	10	0			
,,	,,	Do. Garden establishment.	162	14	3	229	8	3
,,	December...	Do. Garden establishment.	181	6	10	181	6	10
1861	January...	Do. Contingent expenses.	36	6	8			
,,	,,	Do. Garden establishment.	165	14	11	202	5	7
,,	February...	Do. Contingent expenses.	118	14	6			
,,	,,	Do. Garden establishment.	178	14	2	297	12	2
,,	March... ...	Do. Contingent expenses.	45	12	0			
,,	,,	Do. Garden establishment.	198	1	6	243	13	6
1861	April... ...	Do. Contingent expenses.	24	10	0			
,,	,,	Do. Garden establishment.	202	14	4	227	8	4
		Rupees.....				2,595	3	4
		Cash in hand.....				474	3	10
		Total Rupees.....				3,069	7	2

			Rs.	A.	P.	Rs.	A.	P.
		Cash in hand.....	...	...	...	174	11	2
1860.	May... ...	By Government allowance	100	0	0			
,,	,,	Do. Plants and seeds sold	110	4	0	210	4	0
,,	June... ...	Do. Government allowance	100	0	0			
,,	,,	Do. Plants and seeds sold...	133	8	0	233	8	0
,,	July... ...	Do. Government allowance	100	0	0			
,,	,,	Do. Plants and seeds sold	368	2	0	468	2	0
,,	August. ...	Do. Government allowance	100	0	0			
,,	,,	Do. Plants and seeds sold...	128	8	0	228	8	0
,,	September..	Do. Government allowance	100	0	0			
,,	,,	Do. Plants and seeds sold...	173	4	0	273	4	0
,,	October. ...	Do. Government allowance	100	0	0			
,,	,,	Do. Plants and seeds sold	51	14	0	151	14	0
,,	November..	Do. Government allowance	100	0	0			
,,	,,	Do. Plants and seeds sold..	199	7	0	299	7	0
,,	December. .	Do. Government allowance	100	0	0			
,,	,,	Do. Plants and seeds sold	60	2	0	160	2	0
1861	January. ...	Do. Government allowance	100	0	0			
,,	,,	Do. Plants and seeds sold...	110	6	0	210	6	0
,,	February...	Do. Government allowance	100	0	0			
,,	,,	Do. Plants and seeds sold...	141	15	0			
,,	,,	Do. Pay of Apprentice and Writer for August and September 1860	70	0	0	311	15	0
,,	March... ...	Do. Government allowance	100	0	0			
,,	,,	Do. Plants and seeds sold...	75	4	0	175	4	0
,,	April... ...	Do. Government allowance	100	0	0			
,,	,,	Do. Plants and seeds sold...	72	2	0	172	2	0
		Total Rupees.....				3,069	7	2

GOVERNMENT GARDENS, OOTACAMUND,

16th September 1861.

(Signed) W. G. McIVOR,

Superintendent Botanical Gardens.

TABLE B.

Return of Plants, seeds, &c. distributed from the Horticultural Gardens at Ootacamund, for the official year ending the 30th April 1861.

Year and Months.		Fruit trees and shrubs.	Timber trees.	Shrubs and Flowers.	Parcels of seeds.	Value			Total value		
						RS	A.	P	RS	A	P.
1860	May...	.	1,291	131	44	334	4	0			
„	June	...	11	63	34	200	14	0			
„	July	...	302	605	30	325	4	0			
„	August...	42	498	755	24	470	4	0			
„	September	1	481	403	21	395	2	0			
„	October	153	2,996	170	19	469	4	4			
„	November	...	...	169	16	118	3	0			
„	December	...	...	73	15	96	9	0			
1861	January	...	1	204	10	83	6	0			
„	February	..	5	33	6	94	8	0			
„	March...	...	4	107	9	66	8	0			
„	April		...	32	3	22	4	0			
	Total Distribution.....	196	5,589	2,745	231	2,676	6	4	2,676	6	4

GOVERNMENT GARDENS, OOTACAMUND,
16*th September* 1861.

(Signed) W G McIVOR,
Superintendent, Botanical Gardens.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following Report of the Conservator of Forests:—

Submitting his report for the year 1860 61 } (Here enter 24th September 1861, No. 656.)

ORDER THEREON, 25th April 1862, No. 894.

1. The Government deem it useless at this late period to review this report in detail. They will therefore limit their remarks to a few subjects of importance.

Salem Forests.

2. The Penagram Forests of "Acha" wood on the banks of the Cávery are stated to be much injured by the Brinjaries and others who feed their cattle on the young branches of the trees. The attention of the Collector will be called to the subject through the Board of Revenue and he will be instructed to aid the Forest Department in arresting the further destruction of these Forests. The Government wish to know why these Forests if so valuable as represented, have not been conserved and worked by the Forest Department.

3. The Teak and Sandalwood plants in the Salem Forests are also stated to be destroyed by the Malialies and others setting fire to the jungles year after year. The Collector will use his best endeavors to prevent this practice.

Vide paragraphs 10 and 11, Appendix E.

4. The Collector will report through the Board of Revenue on the suggestion of Mr. Blenkinsop to levy a tax of 12 Annas upon each bandy load of bamboos, and of 6 Annas on each bandy load of fuel. The proposal to make the headman of each village answerable for all trees cut in his range cannot be entertained. The village Officers are bound to prevent, as far as they can, the spoliation of the Government Forests, and to afford every assistance in detecting offenders. If they fail in either respect they should be punished by the Collector, but it is the especial duty of the Conservancy Department to look after the Forests, and the Government cannot consent to relieve them of their responsibility.

Appendix E, paragraphs 13 and 14.

5. The suggestion in paragraph 18 to publish in the District Gazette the rules passed for the preservation of the jungles should be at once adopted; separate copies also should be struck off for circulation in the villages adjoining the jungles.

Neilgherry Sholas.

6. The proposal in paragraph 5 to make a good road to the Divi Forests has since been met to a certain extent by a grant of funds. The Assistant Conservator in charge of these Sholas requests in his Report (vide Appendix F,) the assistance of the Revenue authorities to prevent the cutting of young sapplings, the destruction of the newly planted Sholas by cattle. The Board's attention will be called to these points.

7. Major Babington states in paragraph 9 of his report that the contract for supplying firewood and charcoal is kept down by Colonel Woodfall who has been clearing land for a Coffee plantation in the vicinity of the Coonoor Ghát disposing of his wood to coolies at 6 pice the load. He proposes that a seignorage be levied on every load carried out of the plantation for sale, but this cannot be done unless the land was granted subject to this condition.

Tea Plantation.

8. The favorable account given of these plantations in paragraph 8 is gratifying, and the Government trust that Captain Morgan's expectations will be fully realized.

9. As to the suggestion (paragraph 9) to erect a Saw Mill at Ootacamund, the Government observe that in his report, dated 30th April 1860, Captain Morgan suggested that the Steam Saw Mill used at the Wellington Barracks should be removed to Ootacamund, but the Government do not concur in this proposition.

Vide page 109, Cleghorn's Forests and Gardens of South India

Annamalais.

10. There was a large falling off in the sales of wood in this Forest. The decrease amounted to Rupees 23,182 or 34 per cent. The causes assigned are not satisfactory. The Government expect better results in 1861-62. Paragraph 10 of Captain Brine's report (Appendix A) in which he explains the state of the roads leading from the Forest will be referred to the Public Works Department. Paragraph 11 should receive the Acting Conservator's immediate attention. In that paragraph Captain Brine talks very highly of the portion of the Forest on the Anagundy Pass, and states that it is exceedingly rich in teak, Rosewood and other useful timber, but that it has never been worked. Many of these teak trees are stated to be 15 feet in girth, at a height of 4 feet from the ground. Such valuable resources should not be lost. Captain Morgan will procure and submit an early report on the expediency of working this portion of the Forest.

	Rs.
Sales in 1859-60	67,260
Do in 1860-61	44,078
Decrease	23,182

Mudamallay Forest.

11. The proposal to renew the lease of the Mudamullay Forests should be separately submitted with full information.

Madura.

12. The proposal in paragraph 14 (Clause 2), to leave the collection of the Forest products to the Conservancy Department instead of renting them will be referred to the Board of Revenue for their opinion. The Sandalwood jungles on the Palator Hills, alluded to in paragraph 11 of Appendix I, should be carefully preserved, and these trees which are large enough should be felled and sold.

South Canara.

13. In this District as well as in North Canara jealousy between the Revenue and Forests Departments is complained of. The Government cannot deal with vague and general assertions of this nature. The Assistant Conservators should bring to the notice of the Collector any instances which occur of want of willing co-operation on the part of the Revenue Officers of the District.

Cuddapah.

14. The observations in paragraph 17 (Clause 2), regarding the advantage of wooden sleepers over iron pot sleepers will be communicated to the Railway Department. The proposal in the same paragraph (Clause 3) to introduce planting in the jungles in Cuddapah and Salem should be separately submitted.

Firewood.

15. Any well considered suggestions which Captain Morgan may offer in regard to the preservation of firewood jungles will receive attention. The Government are not prepared to grow fuel for the public. They consider that this had better be left to private enterprise while the efforts of Government are restricted to preserving and making the most of the existing supply. The subject has already received attention in paragraph 6 of the Order of Government, dated 4th June 1859, No. 744, and the Board of Revenue have been requested to adopt measures to induce private parties to invest capital in plantations for firewood. The Tope Rules afford very liberal encouragement, and if the people do not plant it must be because other modes of employing capital are more remunerative. The Board will be requested to instruct Collectors to give every publicity to the rules under which land may be taken up for planting purposes.

Page 156, Cleghorn's Forests and Gardens of South India.

16. The suggestion to grow Inga dulcis on the sides of the Railway throughout the line instead of the prickly pear and the Aloe, will be communicated to the Railway Department.

Government Gardens, Ootacamund.

17. The Government are gratified to learn that these gardens have been considerably improved. Mr. McIvor's suggestion to have two Native Apprentices and one European or East Indian Apprentice gardeners is approved, and the altered rates* of salary which involve no additional expense are sanctioned.

	Rs.
* 1 European or East Indian Apprentice	20
2 Native do. at 7½ Rupees each	15

Herbarium.

18 As there is no room for the Herbarium at the Museum and the Superintendent cannot look after it, it must for the present remain attached to the Conservator's Office.

Financial results.

19. The financial results of the year are not explained in the report, but are shown in a table attached to it. The actual profit of the year was Rupees 1,83,732 against Rupees 3,93,591 in the previous year. The decrease appears to be partly owing to the value of the Annamalai timber sold in 1858-59, but included in the accounts of 1859 60. The Board of Revenue will however be requested to submit without delay their report on the accounts for 1860-61, and to point out in it the main causes to which the decrease is owing.

	Rs
Receipts..	3,52 449
Disbursements	1 68,717
Gain .	1.83,732

Vide paragraph 9 of the Order of Government, dated 30th April 1861, No 958

20. The Government learn with satisfaction that the Officers of the Department have performed their duties with zeal and ability.

21. The Government observe that the Report under consideration though dated 24th September 1861, only reached their Office on the 1st ultimo, nearly a year after the period to which it relates. The Government understand that this is owing to its being submitted in print; but in fact it ought to have been before Government three months before the date it bears. Such lengthened delay as has occurred in this case, renders the report practically almost useless.

22. Captain Morgan will take care that the report for 1861-62, due on the 30th instant, is submitted by the 30th June at the latest. He will also restrict himself to a detail of the operations of the year reported on, and its financial results. A progress report is not the place where such propositions as the Establishment of a Saw Mill, and the alteration of an Establishment should be brought forward. Such questions should be separately submitted for orders.

(True Extract.)

(Signed) J. D. SIM,
Secretary to Government.

To the Conservator of Forests.
,, Public Works Department.
,, Board of Revenue.
,, Financial Railway Department.

Exd. T. McMootry.

REPORT

OF THE

CONSERVATOR OF FORESTS,

FOR THE

OFFICIAL YEAR

1861-62.

MADRAS:
PRINTED AND PUBLISHED BY H. SMITH, AT THE FORT SAINT GEORGE GAZETTE PRESS.

1862.

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APPENDIX.

A. Wynád Forest Report.
B. Mudumallai Forest Report.
C. Sigúr Forest Report.
D. South Canara Forest Report.
E. Nilgiri Shola Report.
F. Wellington Plantation Report.
G. Anamallai Forest Report.
H. Madura Forest Report.
I. Nelambore Teak Forest Report.
J. Cuddapah and North Arcot Forest Report.
K. Salem Forest Report.
L. North Canara Forest Report.

ERRATA LIST.

Para 5, line 3 for *Jubbulpore, Pegu and possess them* read *Jubbulpore and Pegu possess them.*

Para 40, line 23 for *dense shola* read *dense sholas.*

CAMP OOTACAMUND,
1*st May* 1862.

No. 1.

From MAJOR H R. MORGAN,

Officiating Conservator of Forests.

To J D. SIM, ESQ.,

Secretary to Government, Revenue Department.

SIR,

I have the honor to forward my annual Report for 1861-62, of the Forests under my charge.

2. WYNAD FORESTS.—In the month of February last, I proceeded on a tour of inspection through these Forests, accompanied by the Assistant in charge, Captain Hunter. The Forests were traversed from Korchat in the east to Kooderykote in the west, a distance of some forty miles. Vast clearings for Raggi have from time to time taken place in these Forests, and there is hardly a square mile where traces of the "Tukkul"* system may not be seen, but owing to the richness of the soil, and moisture of the climate, the Teak tree has, in most places, defied all efforts at extirpation. In some parts suckers from the old stoles, shooting up some fifty feet straight as a fir, may be counted by thousands. In other parts it is lamentable to see the destruction caused by Coorumbers; acres and acres of girdled Teak trees of every size, from the sapling six inches in diameter, to the noble tree upwards of three feet. It is the sale of these girdled trees, from which at present, we derive a revenue, and to clear out the Forests thoroughly, it will take at least three years, so numerous are the girdled trees. Very high prices have been realized for this dry Teak, as it is called, eight Annas a cubic foot, or on an average ten Rupees á tree, some of the trees being small, this rate may be considered, as very remunerative.

* Temporary clearing

3. *Contractors.*—The only thing to be guarded against is fraud on the part of the Contractor, who readily signs a contract, to take away every tree squaring more than six inches, but contents himself with taking only the choicest trees, and leaving the indifferent ones, to the manifest loss of Government. On examining the proceedings of a Contractor, both in the Korchat and Kooderykote Forests, I speedily ascertained that he had helped himself to some of the finest green trees in the Forest, some I measured were fifty feet in length, squaring to fourteen inches, and if cut in two, worth 3 Rupees a cubic foot in the Mysore market. The amount of personal supervision required in a Forest, owing to the distances, is great, but absolutely necessary, as it is impossible to control a Contractor without it.

4. *System of Tukkul or temporary clearing.*—I am happy to report that the system of Tukkul or temporary clearing is on the decline in these Forests, we only found it in full operation in a few places. A complaint was speedily lodged against the parties and the system has, I would hope, received a check. In some places where Tukkul had been very extensively carried on, the Teak tree was quite extirpated, and a noxious growth of weeds and scrub jungle was all that was to be seen.

5. *Assistant to be a Magistrate.*—To render the Assistant in charge of these Forests, fully effective, I would recommend that he should have Magisterial powers, as Forest Officers in Jubbulpore, Pegu, and possess them. Captain Hunter in his report, points out that his hands would be much strengthened, if granted Magisterial powers, and as Coffee planters and others are to be made Magistrates, I think it would be much to the advantage of Government if the Forest Assistant was a Magistrate.

Appendix A

6. The Hoonsoor Forest.—Whilst examining the Wynád Forests, I took the opportunity of examining the Hoonsoor Forest, which by an Order* of Government had been made over to this Department; but the Order for some reason has never been carried out.

* No. 577, 28th April 1859 R. D.

7. *Wasteful System pursued.*—The wasteful system of felling pursued by the Contractors who leave (tops of trees ten to fifteen feet in length, and squaring from ten inches to a foot) behind them, to be destroyed by fire, has already been reported to Government. The reckless system of Tukkul, more prevalent in this than the Wynád Forests, has also been detailed, and a project for placing and working the Wynád and Hoonsoor Forests under one Assistant, has been submitted to Government; unless speedy measures are adopted, this fine Forest will be ruined, or at least thrown back for years to come.

No 626, 20th March 1862. R.D.

No. 790, 9th April 1862. R.D.

8. *The advantage of a Ghat via Tamburcherry.*—The opening of the Tamburcherry Ghat will enable us to carry our timber to the coast at a cost of about 16 Rupees per ton. Whereas the present price of carriage is 50 Rupees. The price of timber on the coast is from 75 to 100 Rupees per ton, according to quality, and it would be very remunerative at even 75 Rupees a ton, or 1 Rupee, 8 Annas the cubic foot. We could fell and deliver the timber at 12 Annas the cubic foot, this would leave at least a profit of 12 Annas the cubic foot, but if only first class timber was sent to the coast, a greater profit would be realized; indeed, the timber could afford to pay a toll of 2½ Rupees the cart or 5 Rupees the ton, merely for using the Ghat; as without the Ghat, one of our principal markets would be closed to us.

9. *Boundaries.*—I regret to report that the boundaries of the different Government Forests have not yet been decided. The consequence is, that in many places we cannot work the Forests, and the Assistant is liable at any time to be involved in a law suit. It is very advisable that not only should the claims of the Devastanum people be settled, but boundaries clearly defined.

10. *Title to land.*—The priest of the ancient Tiromalli Pagoda, claims all the land in that part of the country, and just as I had arrived, made over his so-called claims to various Chetties, who at once began felling, in order to obtain a title, and when called upon to show their title deeds, would at once produce a smoked cadjan leaf, or bamboo, with the title ante-dated some fifty years, to prove the antiquity of their claims. I found the whole system of titles a chaos, it was impossible to say which was Government Forest land; a squatter actually claimed the whole of the Teak Forest of Koderykote, though he knew it had been worked by Government, years before he came there. No claim is too preposterous to be set up, and it is voluminously supported by basket loads of forged documents. Every day increases the evil, and the only remedy that I can suggest, would be the appointment of a Special Commissioner, well versed in Malabar tenures and the history of Wynád to proceed to the spot, and give a title, his decision to be beyond appeal. In this manner our Forest boundaries may be settled and the work of conservancy proceed.

11. *Grants of land.*—I had several applications for land, and it became necessary to draw a line, accordingly, the line of the Teak belt was chosen; all other land in Wynád, though there might be a considerable amount of Blackwood and Vengay on it, was given up, as a general rule. In the north of Wynád, just outside the Teak belt, there is a good deal of Blackwood; but unless we could fell it, and were prepared to remove it, I do not see the use of keeping out the pioneers of civilization, viz. the Coffee planters, for the sake of merely conserving timber we cannot make use of in any way.

12. *Financial condition.*—It will be seen from the returns that the expenses of conserving Wynád have been more than met by the receipts, and next year I anticipate a profit of at least 10,000 Rupees, if the Hoonsoor Forest is incorporated with the Wynád Forests and worked systematically. A grant of Rupees 5,000 has been sanctioned, which I have no doubt will be enough for the present.

13. *Teak a Royalty.*—Captain Hunter speaks of Teak being a Royalty, and I have already brought to the notice of Government the extreme value of the Teak Forests, and the little probability there is of the Devastanum people ever having been granted the right to cut Teak.

No. 844, 15th April 1862, R. D.

14. The settlement of the ownership of the 5,000 logs of Teak mentioned by Captain Hunter is much required, I myself saw many hundred logs at Kakenbottah, which had been passed across the river, (after the order to prevent carrying of Teak out of the Forests had been issued) in order that the owners might say it had not been cut in Government Forests.

Appendix A.

15. MUDAMALLAI FORESTS.—I have visited this Forest three times during the past year, the working of the Forest has been energetically carried on. The Bangalore Barracks, Railway, Neilgherry Barracks, Jail, and other works have been supplied with timber, whilst large Depôts containing 90,000 cubic feet of timber, have been formed at Sawyers village and Tippacadoo, by Captain Gib.

16. *Appendix B.*—I do not think from what I saw that much Teak fit for felling will be left in the Forest by March 1863; at my last visit we were cutting on the borders of the Wynád Forests. As the boundary line was not clearly defined, there was some doubt, and I stopt the felling in that direction, and requested Captain Hunter in charge of the Wynád Forests to have the boundary line defined as early as possible, it was supposed to be clearly known to the Adigarie of the Monenad Umshum, but to no one else.

17. *Financial Results.*—It will be seen from Appendix B, that the expenditure is more than equalled by the receipts, whilst a large quantity of seasoned timber has been collected, so as to be available for any Public Works, either at Bangalore or the Neilgherries.

Expenditure Rs..... 37,474
Receipts ... ,, ... 37,936

The Lawrence Asylum alone will require some 30,000 Rupees of wood this year, and possibly the Bangalore Barracks and Railway, nearly an equal amount.

18. *Stock of wood on hand.*—The value of wood on hand on the 1st of May 1862 is Rupees 1,31,211-0-6 against on 1st May 1861, Rupees 99,492-4-0, which leaves a balance in favor of the Forest of Rupees 31,718-12-6, besides the value of the plant purchased during the year. Very valuable assistance has been afforded by the Manager Kistnapah.

19. SIGÚR FOREST.—I have visited this Forest during the past year, the Teak is strictly conserved, but no operations in Teak or Vengay have been carried on during the past year.

20. *Waste land.*—Large demands for waste lands in this Forest have been made under the new Act, and much difficulty in meeting the demands is felt. Where all the finest trees grow, there the Coffee planter selects his ground, and to reserve all would perhaps check Coffee planting too much, still some medium must be observed, to give away land which produces Teak and Vengay trees, worth squared from six to twelve Annas a cubic foot on the spot, would be ruinous to the interests of Government. I think Teak might be reserved and Vengay or other woods if sold, should pay a seignorage of one Rupee per cart load.

It has been ruled that, where there are valuable trees, parties desiring the land should purchase them standing, at their value, and this seems a fair rule; still, under these conditions, I do not think much land would be taken up.

M. M C., No. 1,086, 5th August 1858, para. 22
Cleghorn's Forests p 30.

21. *Financial results, Appendix C.*—The results of working the Sigúr Sandal-wood jungles are, according to Captain Gib, nearly twenty thousand Rupees, of course the profit would have been less, if a portion of the supervision had been charged. The great amount of Mudamallai wood in Depôt relieves the Sigúr Forest much, as it requires rest, owing to Contractors in former years, having taken out nearly every Teak tree fit to be cut.

22. *Future proceedings.*—The work of Sandal-wood cutting is still proceeding, and a large range of country remains untouched, for years to come an annual profit of Rupees 20,000 may be expected from these jungles. Want of labor in the direction of Hassanoor, whither our works tend, will prevent our realizing a larger sum than the above. The jungles are but thinly inhabited and very unhealthy. Local labor is not readily procured.

23. SOUTH CANARA.—These Forests have hitherto been worked on the stump-fee system, but this year a sum has been sanctioned, to enable the Forest Department, to fell and bring to the Depôt, Teak, Poon, and other timber.

24. *Stump-fee system.*—The system of stump-fees is not remunerative, especially when Government has a small Establishment to look after the work; for instance, trees containing 40 cubic feet of Teak, were frequently sold at Nellumbore for a stump-fee of ten Rupees, or four Annas the cubic foot; if we had felled these trees and dragged them to a Depôt, we should have obtained

nearly 80 Rupees each for them, if the outlay for felling and dragging, say ten Rupees is deducted, we should, instead of ten Rupees, have made a profit of from 60 to 70 Rupees.

25. *Appendix D.*—It will be observed from Overseer Thompson's report that the greater part of the Forests require rest, and the Overseer's time is principally taken up in training young trees of Teak and Blackwood.

26. *Systematic working.*—There are many parts that might be worked with profit, and it was my intention this year, to have gone thoroughly into the subject, and recommended (if found practicable) the formation of a regular Establishment for the systematic working of the jungles; this plan always being more profitable than the stump-fee system, where there are valuable trees.

27. *Financial Results.*—The financial returns more than cover the cost of conservancy, and I have no doubt that in course of time, these jungles will not only be recovering under conservancy, but will also yield a fair revenue.

28. NEILGHERRY SHOLAHS.—I have inspected the woods several times in the past year, preparations for re-planting the Governor's Sholah have been made; several thousand pits have been dug, and the young plants are ready to be put in with the first rains. Those planted out last year are doing well.

29. *Firewood Contractor.*—The case of the firewood Contractors, Wilson and Co., who threw up their contract at the end of the year, has been reported to Government, and is still under investigation.

No 718, 1st April 1862 R.D.

30. *New leases of land.*—In all cases where the making over of Forest land to parties has been referred to me by the Collector, I have always recommended, that a fee of one Rupee per bandy load, should be levied by the Forest Department, in the event of the landholder, selling the wood off the estate, and that the land should only be granted on these terms.

31. *Financial results.*—The returns show a fair amount realized by the sale of Sholas,* but unfortunately the cost of the supervision, is out of all proportion to the returns; a proposition† has been submitted to Government, to place the Neilgherry Sholahs under the Officer in charge of Mudamalli and Sigúr Forests, and thus save the Budget a sum of more than ten thousand Rupees, this project not having been sanctioned by Government, it was proposed to place the Nellumbore Teak plantations under the Officer in charge of the Sholahs, the matter is still under reference. Considering how very small the returns are, it is a question, if the Nellumbore plantations and Neilgherry Sholahs can at present bear the salary of even Rupees 600 a month, as recommended by me in a former letter.

* Major Babington's Report, Appendix E, Rs. 6,245-0-5.

† No 209, 5th Feby. 1862. R. D

No. 170, 1st Feby. 1862. R. D.

No. 1067, 15th May 1862. R. D.

32. WELLINGTON FIREWOOD PLANTATIONS.—I have twice inspected these plantations in the past year, and consider that they now wear a slightly improved aspect, but the cost of planting is out of all proportion to the results obtained. Major Babington gives the total money expended at Rupees 12,617-0-7, and if we add Overseer Hall's pay for four years at 1,000 Rupees a year, then the total expended is nearly seventeen thousand Rupees, over about 100 acres, or the cost is 170 Rupees an acre, or just three times what it ought to have been. Grass land can be laid out in trenches two feet deep and one foot wide for 30 Rupees the acre, to rear the plants, put them out, and supervise them, 30 Rupees is ample; thus 60 Rupees an acre is an outside cost, and would include roads, ditches, tools, &c., thus one hundred acres should have cost 6,000 Rupees instead of 17,000 Rupees.

Cost of planting, Appendix F.

33. *Future system of planting.*—I have ordered that trenches for the future should be the only system, and have selected an excellent site to commence upon. The estimate for planting an acre of grass or scrub jungle land, is as follows.

5,500 running feet of trenches 2′ × 1′ at 5 Rs. per 1,000 feet, is Rupees	27	8	0
1,000 Plants of Acacia stricta	10	0	0
Filling in trenches	5	0	0
Planting	1	0	0
Paths, tools, sundries	10	0	0
	53	8	0
Supervision.	6	8	0
Total Rupees.....	60	0	0

34. In justice to Overseer Hull, I must say that the old system was not his, nor is he responsible for the planting attempts made on soil, that would not even grow grass, much less trees.

35. *Financial results.*—In course of time there may be a demand for the thinnings, but up to this there has been no inquiry for poles, and the firewood will not be fit for the market for some time to come; under the new system the cost will be but one-third, and the progress of the trees three times as great as in the old pit system, thus finally the plantations may become remunerative.

36. CINCHONA EXPERIMENT.—*Preliminary remarks.*—Having been called upon to report periodically on the Cinchona experiment, now being conducted by Mr. McIvor of the Government Gardens, Ootacamund, I take this opportunity of reviewing and reporting upon the experiment from the commencement up to the present date.

No. 2244, 30th November 1861. R. D.

In the year 1859, the Secretary of State ordered the Conservator of Forests in conjunction with Mr. McIvor to select suitable localities for the reception of certain Cinchona plants shortly expected from England. A site at Neddiwattum was selected and in October 1860, Mr. McIvor received charge of certain Cinchona plants from Mr. Markham, these plants being sickly at the time of their arrival, all died; but fortunately Mr. Cross arrived shortly afterwards with 463 plants of the *C. succirubra*, and 6 *C. Calisaya* plants. A liberal supply of *succirubra* and other varieties of *Cinchona* seeds were also received at this time.

Vide letter from Secretary of State, No. 21, 9th June 1859, recorded in Proceedings of Government, No. 1,072, 14th July 1859. P D.

The experiment seemed now to be progressing favorably under the able management of Mr. McIvor, when an order was issued by Government (on the representations of Dr. McPherson who had visited the Java Cinchona plantations) that all operations in the Government Gardens at Ootacamund should be put a stop to, and the plants and seeds taken to Neddiwattum and Dr. McPherson's Java plans carried out.

No. 552, 9th March 1861, para. 5. R. D.

Fortunately for the success of the experiment both Mr. McIvor and myself had strong doubts regarding the value of the Java mode of cultivation, and as both Mr. McIvor and myself had for many years enjoyed practical experience in Arboriculture on these hills, and were moreover acquainted with first principles, (which were certainly not embodied in the Java mode of cultivation) we were in a position to show Government that our plans were safe and worthy of trial. Government accordingly adopted them, and the experiment as far as it has gone, fully justifies the expectations formed. At the same time, however, consequent upon Mr. McIvor's representations, regarding the interference he had already been subjected to, and lest the success of the experiment should be endangered by further interference, he solicited, and obtained, entire freedom of action in his experiment, and I was simply to act as observer and reporter.

Vide Mr. McIvor's letter to Government, No. 59, 9th May 1861, recorded in Proceedings of Government, No. 1,328, 3rd July 1861. R. D.

37. *Firewood.*—It is satisfactory to know that as we have to replant woods and supply the hills with firewood, that after the Cinchona trees are stripped of their bark, the trunks (Vide Mr. Spruce's Report, pages 23 and 24) will afford an excellent firewood and thus a matter which has given rise to much trouble, will be at once set at rest for ever.

38. *Elevation and sites.*—It is a fact worthy of note that Mr. Spruce, page 28, states that the highest growing *succirubra*, (4,500 feet) gave more bark than those grown at a lower elevation, and the value of the bark of this tree at Guayaquil was nearly 800 Rupees. Again page 27. "in "cutting down trees in hot plains, I have often been struck with the thinness of the bark compared "to that of trees growing in *temperate climes*." Again, "the greater the height at which the "tree grows, the larger is the proportion of alkaloids contained in the bark," page 33.

39. *The Dutch failure.*—The Dutch in Java have planted out about 500,000 plants of the *C. Lucumæfolia*, or *Pahudiana*, these at 25 feet* apart will cover the enormous area of ten square miles, and we are told that the Dutch have achieved great success (by Dr. McPherson and others), yet on inquiry it turns out that Howard the great Quinine Manufacturer, can find Quinine in neither root nor bark of the *C. Lucumæfolia* or

* Dr. Junghuhn, page 23.

Pahudiana. This stupendous blunder of the Dutch is without parallel in the history of Arboriculture, and, as if this blunder was not sufficient, we are called upon to imitate the falacious mode of culture adopted by the Dutch in Java, viz., dense shade, and an absurd system of placing single seeds in bamboo pots. It is unfortunate that we are not in a position to know the cost of supervision, &c. per acre of Dutch planting; it would probably be found as expensive and equally futile as the rest of their arrangements. Howard, page 3, gives no hope of *C. Pahudiana* or *Lucumæfolia*, ever yielding Quinine, but Drs. Anderson and Junghuhn are more sanguine. Again at page 5 Howard in his great work "Illustrations of the Nueva Quinologia of Pavon" whilst their *Calisaya* "bark yields more than three per cent. of Quinine, this plant under the same conditions does not "yield half per cent."

40. *Sites*—In page 13 paragraph 3, Dr. Anderson writes "In the 1st instance from there "being no one on the Neilgherries who could point out the sites on those mountains best "adapted for receiving the plants, and thus they were considered to be safer under the pro-"tection of a glass-house." There is a serious error here. The proper sites were well known and settled long before a plant arrived. Placing the plants in the glass-house was done purposely to acclimatise them, and we should have been foolish indeed to plant them out at once. Again in paragraph 4 page, 14. Dr. Anderson says. "The great *difference** that "exists between the climates of the South American Cinchona Forests and "the Neilgherries ought to have received greater attention than it has, and "in the selection of sites, convenience of access from Ootacamund should "have been made subservient to the greater consideration of climate." I have studied the climate of these hills for seventeen years. I have introduced at various elevations plants from all parts of the world, from Japan, California, China, Jamaica, Australia, &c., &c., and am informed that the matter of sites has not been properly considered! Again in paragraph 7, regarding climate, Dr. Anderson is entirely mistaken. As for dryness I can only say that in January and February I was on each occasion wet through in visiting a forest which I had selected as a site for a Cinchona plantation, and though we have one or two dry months in the year, as a rule, anywhere south or west of Otacamund, the climate is humid to a degree.† At page 23, para. 16, Dr. Anderson has fallen into the same error as the Dutch, and speaks of the "shady moist woods of the mountain" as the *sine qua non* for *C. Micrantha.* It is a fact as proved by Mr. Spruce that the more shady the place the worse the bark, and the tree never flowers; page, 23. I have observed Orchids which grew luxuriantly in dense shola, but never flowered, the same kind exposed to sunshine at a few hundred yards distance flowered in perfection. At page 10 para. 9 Dr. Anderson tells us that the plants at Tjibodas "from exposure *to the sun and air* are mere leafy bushes 10 or 15 feet in height," but Dr. Junghuhn page 15, tells us that the cause of this failure was "1st they were *too low and too hot*; 2d, they are, or rather were, shoved as it were into "spanish boots, that is, with their roots in thin, *half foot thick earth*, right above a *ledge of rocks*. In answer to paragraph 12 page 11 of Dr. Anderson's report, I can only again repeat what I said in my former report, that "a good practical gardener would have done more for them", and their gigantic failure would have been avoided.

* Vide Mr. Cross page 5. The climate is certainly very similar to that of the Neilgherries.

† Mr. Cross page 5. "The climate is certainly "very similar to that of the "Neilgherries, but the al-"luvial deposit is shal-"low."

Mr. Spruce page 23, speaking of the Red Bark says, "It is far more abundant on their "*northern* than on their *southern* slope, nor did I see a single tree with flowers or fruit in a "*southern* aspect. The northern and eastern sides of the trees themselves had borne most flowers, "and, except on one tree of more *open growth* than the rest, scarcely a capsule ripened on their "southern and western sides. These phenomena are explained by the facts that, in the summer "season, the trees receive most sun from the east and north, for the mornings are generally "clear and sunny, whilst the afternoons are almost invariably foggy, and the sun's declination "is northerly. Another notable circumstance is that the trees standing *in open ground*-pasture, "cane-field, &c.—are far healthier and more luxuriant than those growing in the forest, where they "are hemmed in and *partially shaded* by other trees, and that, while many of the former had "flowered freely, the latter were, without exception, sterile. This plainly shows that, although "the Red Bark may need shade whilst young and tender, it *really requires* (like most trees) plenty "of air, light, and room, wherein to develope its proportions."

41. *Temperature.*—Mr. Spruce at 2,800 feet elevation ascertained the mean temperature to be 68°, therefore it may fairly be assumed that at 5,000 feet the elevation at which the Red Bark grows best, the mean temperature was probably 58°, as I have observed on these hills, that the mean temperature is 5 degrees for every 1,000 feet of elevation, thus Ootacamund is 56° and Kulhutty, 2,000 feet lower, is 66°. The same remark will apply to the nursery at Neddiwattem which at 5,400 feet will nearly equal the temperature best suited to the *succirubra*, viz 64°; the plantation site at 6,000 feet would then be 61°, an extremely favourable temperature for developing alkaloid. As for *C. succirubra* being a tropical tree, (Page 22 Page 14, Dr. Anderson) I know many spots on the Hills, where palms such as, *Calameæ* grow at 6,600 feet or 600 feet above the elevation of the Neddiwattem plantation.* I would also here observe that *Cinchonas* are neither to be planted in swamps nor on bare hills, but in protected ravines which are always 5° warmer than plains and 10° warmer than swamps, and that we do not require to know the degree of cold in a *swamp* vide Dr. Anderson.

* Mr. Cross page 2, found C. *succirubra* up to 9,000 feet elevation.

42. *Value of Bark and age of Trees.*—The value of the bark of the tree mentioned by Mr. Spruce as having been cut at 4,500 feet was nearly 800 Rupees and two trees, shoots from old stools, (Page 31 foot note) were calculated to yield at fifteen years of age two quintals each of bark which at 43 dollars the quintal is equal to 172 Rupees each, but the Dutch, vide Dr. Anderson's report page 10, paragraph 9, "do not expect *C. Pahudiana* to yield bark of any value under fifty years," (if it ever yields at all) of this kind they have nearly ten square miles. This is indeed a contrast!

43. *Rain-fall.*—Dr. Anderson has quoted our rain-fall at 48 inches and seems to infer that the whole of this amount falls within six months. The rain-fall in woods south or west of Ootacamund is nearer 80 inches and distributed over ten months of the year. For weeks together we have a driving mist and perhaps not a quarter of an inch of rain per diem. In the west of Ireland where it rains for more than 300 days in the year, the rain-fall is not much more than 36 inches, and the climate very moist. It has been ascertained that the greatest rain-fall on mountains takes place in a zone at an elevation of from 4 to 5,500 feet or just the elevation where the *C. succirubra* was found on Chimborazo, it is therefore satisfactory to know that the *Cinchonas* growing from 6 to 10,000 feet elevation, do not obtain the same amount of rain as those growing lower, consequently the amount of rainfall necessary for *C. nitida*, *Condaminea* and others, would fall far short of that required by the lower growing *C. succirubra*.

44. *Conclusion.*—From the above remarks it is clear that if we obtain certain conditions, the *C. succirubra* will be a success.

I. If the mean temperature at 5,000 feet elevation on Chimborazo is nearly 61°, and the mean temperature of the plantation at Neddiwattem is the same, then the condition of temperature is satisfactorily established and, I think, I have proved that it is likely to be so.

II. If the plants at the elevation of 6,000 feet grow well, then it matters not if the rainfall is 80 or 150 inches, (though, I believe, the latter is nearer the mark,) and we shall have secured what is indispensable to the production of Quinine, viz. *elevation*.

III. The planting of trees in open tracts in the Forest is, I consider, indispensable to the production of healthy bark, indeed, no one conversant with first principles could argue otherwise.

IV. The success of *C. succirubra* established, that of *C. Calisaya*, *Condaminea*, *Micrantha*, *Peruviana* &c., must follow.

V. Exception has been taken to garden cultivation for Cinchonas, I would ask Why is the Cinnamon tree cultivated? Why is the soil dug and aërated? The Cinnamon tree is cultivated for its bark, the tree in dense shade and damp woods at Neddiwattem and elsewhere grows to a large size, but art, combined with nature, produces a finer article of commerce than nature alone. It is not so much the size of the tree as the amount of alkaloid contained in the bark that we require; and to produce this, we plant Cinchona as we would Coffee, Tea, Cinnamon or spices. I have already shown that the Sandal tree grown in shady moist ravines produces no fine scented heart-wood, but grown in the open, the heart wood is very superior. The like successful result will take place if the Cinchona is properly treated.

VI. From Mr. Cross' report just received, it is very satisfactory to know that he approves of the sites selected on these Hills, more especially, as he is the only practical man who has examined the sites here and those on the Andes where the best varieties of Cinchona grow.

45. *Nursery at Neddiwattem.*—On the 30th of April last, I inspected the Cinchonasites at Neddiwattem, the plants in the Nursery at an elevation of 5,400 feet were looking remarkably well, and are from 12 to 15 inches in height; they consist of 500 *C. succirubra, Micrantha* and *Peruviana.* At present only four beds are filled, but shortly some fifty beds capable of holding about 50,000 plants will be ready. The site of the Nursery is well chosen, the soil is a rich brown loam, and the aspect is north. Some 3,000 plants have since been sent out.

46. *Upper plantation.*—Seventy acres have been felled and burnt, and about 5,000 running feet of trenches 2′ × 1½′ have been dug. It will be advisable to have catch drains with silt traps on both faces of the plantation; otherwise, the rush of the storm waters will infallibly denude the plantation of the whole of the surface soil As the sides of the ravine in which the plantation is situated, are rather steep, it will be necessary to leave one trench in ten open to serve as a catch drain, with silt traps at one hundred feet intervals, the traps may be 10′×4′ ×4′, when filled, the contents should at once be removed and spread round the roots of the trees; in this manner an efficient system of manuring can be kept up. Mr. McIvor, has very properly dug his trenches at right angles to the slope of the hill, this method will greatly prevent a rush of water. From an acre of cleared land on a steep slope, I have taken after a heavy shower as much as three cubic yards of silt.

47. *Elevation.*—The greatest elevation of this plantation is 5,900 feet, it faces the north, the surface soil is excellent, the sub-soil consists of decomposing gneiss boulders.

48. *Plants.*—I examined some plants of *C succirubra* and others which had been put out in November last; all that I saw were healthy, and one *succirubra* reported to be 9′ when planted out, is now twenty-five inches in height and very healthy; this is encouraging, when it is considered that the plants were delicate when first put out, and have only just weathered the most unfavorable part of the year, and at an elevation of 5,900 feet.

49. *Overseers' houses.*—Very little has yet been done for the Overseers' houses, want of labor has been Mr. McIvor's great difficulty; bricks are ready, a site prepared, and a branch-road made. It would have tended to expedite the building of these houses, if they had been made over to the Department Public Works, as they had labor on the spot, in fact had just repaired the public Bungalow. Instead of tiles, it would be well if galvanised iron was substitued, as unless the tiles are dipped in coal tar, they soon accumulate moss in this damp climate.

50. *Cooly lines and Store house.*—A small thatched hut for the Overseer in charge of the Nursery is finished, a temporary Store-house and Cooly-lines have been run up; but it is very important, that as soon as possible substantial brick in mud lines be built; otherwise, from being badly housed the Coolies may get sick and leave. The Store house for grain should be of brick in chunam with asphalted floor.

51. *Glass-house.*—A glass-house for the propagation of the plants is much required, at present the cost of carriage cannot be under half an Anna a plant, or on a hundred thousand it will amount to 3,000 Rupees, enough to build two glass-houses. There is also some risk of damage to the plants in their carriage from Ootacamund to this, the plants can also be propagated more quickly under glass than in the nursery, and will be less liable to damage from hail, &c.

52. *Fencing.*—The best fence for the plantation would be a ditch three feet wide at top and one at bottom, and three feet deep, with a stout fence on the top four feet high, this would last for years, and be cheaper than anything I know. A wall was proposed but it would take too long to build, and be very expensive; a wall six feet high of brick in mud, could not be built out here under 3 Rupees the running yard, then 100 acres require 3,000 running yards or 9,000 Rupees; whereas a ditch 3′×3′×2′ would cost per running yard 2 Annas and 2 Annas for the fence equal 4 Annas, or Rupees 720 against Rupees 9,000 for the wall. Rose cuttings may be planted on the loose soil taken out of the ditch, and before the fence decays will form an impenetrable barrier.

53. *Ootacamund plantation.*—A sholah containing about 40 acres has been partially trenched and filled, the situation is excellent, well protected, and the generality of the soil is a rich black mould. I have recommended Mr. McIvor to have catch-drains and silt traps, as some of the ground is very steep. Mr. McIvor has very properly trenched nearly the whole of the ground, this, I

know from practical experience to be the best plan, as it gives the plants a start of at least two years over those in pits. I have myself tried *Eucalypti* in pits and trenches on grass land, the trees in the latter, are certainly three years in advance of those in pits. The great secret is to give the plant a start the first year, after that it can take care of itself.

The trees in this plantation have in some places been left, so that the effect of partial shade may be tested. Not that Mr. McIvor is not fully confident of success in following the plan of cuting awayt everything, but he has determined to try both plans.

I have tried both plans with *Eucalypti* and have found the trees grow as fast again where there was no shade. In fact the shade from large trees, makes the young trees tender and unhealthy.

54. *Propagating House.*—An excellent propagating house has been built by Mr. McIvor on the newest system, with bottom heat, and from this and a lower house some 12,000 plants are turned out monthly, the success in propagating the plants has been extraordinary, and reflects the highest credit on Mr. McIvor's skill and perseverance, for it required no ordinary care to obtain such success as he has. The Cinchona plant is very delicate in its first stages, requiring immense watchfulness, but hardy enough when a year old. The lower glass-houses are full of plants in all stages, from the delicate seedling, to the large plants brought by Mr. Cross, two of which will probably seed next year.

55. *Seeds.*—Seeds of the *C. Condaminea* have lately been received from Mr. Cross, and have germinated with hardly a failure; they are now coming up by thousands, this plant is eminently suited for the Dodabetta site. A variety *C. Crespilla* which curiously enough Mr. Cross found on mountains with peaty soil, is also germinating, and will apparently suit our black peaty soil, which abounds in many parts of the grass land of these Hills.

56. *Trees planted out in the Ootacamund Garden.*—Mr McIvor as an experiment, put out last September six *succirubra* plants, they have not grown much, as the season has been unfavorable, but they are now beginning to push their leaves, under the influence of the prevailing showers, they are perfectly healthy, and will soon increase in size, the large leaves, suffered a little from the unprecedented violent hail storms; the general health of the plant was uninjured.

57. *Overseers Houses, &c.*—An excellent bungalow adjoining the propagating house has been built by McIvor, for the Overseer in charge, and a bungalow for the Overseer in charge of the upper plantation is nearly finished, as also substantial buildings for his gardeners.

58. *Number of Plants.*—There are 1,200 large plants, from which small plants are constantly being propagated, the rest consist of seedlings and rooted cuttings. A memorandum of the plants, furnished by Mr. McIvor, is appended. The total number is 31,495.

Report on the number and condition of the Cinchona Plants in cultivation on the Neilgherries on the 30th April 1862.

Botanical Names.	Commercial Names.	No. of Plants.	Value in the London market per lb. of dry Bark.
			s. *d.* *s.* *d.*
1. Cinchonæ succirubra.....	Red bark ...	14,450	2 6 to 8 9
2. „ Calisaya	Yellow bark ...	237	2 10 to 7 0
3. „ Condaminea *var.* Urituainga. ...	Original Loxa bark.	1	2 10 to 7 0
4. „ „ *var.* Chahuarguera.	Rusty crown bark ...	8,000	2 10 to 7 0
5. „ „ *var.* Crespilla.....	Fine crown bark ...	105	2 10 to 6 0
6. „ Lancifolia from Java	Crown bark ...	1	1 8 to 2 10
7. „ Nitida.....	Genuine grey bark...	2,922	1 8 to 2 9
8. „ Species without name.....	Fine grey bark ...	1,211	1 8 to 2 10
9. „ Micrantha	Grey bark.	3,786	1 8 to 2 9
10. „ Peruviana.....	Finest grey bark.....	357	1 8 to 2 10
11. „ Pahudiana from Java...	Unknown... ...	425	Worthless...
	Total number of Plants.....	31,495	

Remarks.—The whole of the plants are in the finest possible state of health, with the exception of *C. Lancifolia* and and *C. Chahuarguera*. Our plants in the open air, within the last two months in rapidity of growth, general health and luxuriance, having much exceeded those in our glass-houses.

reported 1,345 planks as cut and slipped. Personal supervision would have told him, they were not at the bottom of the slip, and by his books, he might have ascertained, that they had never been cut.

IX. It has been the custom for the Superintendent to visit the Forest only from July to November, I think it would be better if he made Coimbatore his Head-Quarters, and visited the Forest every month from June to February. As during these months, work in the Forest is always going on. Merely to see the work between July and November is not sufficient, the principal carting work above the slip, does not commence before December, in fact most of the work is done in December, January and February. Axomen cutting planks up to the end of February.*

Appendix A. Annual Report 1860-61.

64. *Travelling allowance.*—The Superintendent should draw 5 Rupees a day travelling allowance, when marching, the extra amount of supervision would more than repay the outlay.

65. *Supervision cost of.*—The average cost of supervision for the Anamallais is 10,000 Rs. per annum so that if even 40,000 cubic feet of timber are cut, the supervision amounts to the large sum of 4 Annas a cubic foot; but in Captain Brine's year only 18,000 cubic feet were cut, the supervision actually amounted to more than eight (8) Annas a cubic foot, the supervision on the Anamallais should never exceed 3 Annas a cubic foot, or for ten thousand Rupees, some 53,000 cubic feet of planks and logs should be turned out. It will be seen from the abve approximate data which are nearly correct, how much may be saved or wasted by a Superintendent.

1 100 planks × 13 = 14,300 logs.
245 × 16 = 3,920
Total C. feet... 18,220

66. *Anamallai profits.*—The profit for 1858-59 of the Anamallais, was 45,173 Rupees, not Rupees 2,43,468 as erroneously entered in the report for the year 1859-60; how the mistake arose I cannot say, but in looking over the Central Office accounts, I found that the profits of the Anamallais for three years, instead of one year, had been entered. This reduces the real profit of 1858 and 1859 to Rupees 1,98,294, against Rupees 1,83,732 for 1859-60, or a falling off of Rupees 14,562, entirely due to the Anamallais; the receipts from the other Forests, having rather increased than diminished, with the exception of Mudumallai, where a great outlay had been incurred to store the timber against any future demand. I have been induced to correct this mistake at this late date, lest Government should think that there had been a great falling off in the receipts.

67. Madura Forests.—From Mr. Sperschneider's report, it will be seen that, there is an improvement in the revenue, as I anticipated, and this year I intended to have fully explored the Cumbum valley and Palatoor Sandalwood jungles, and to have organized a small but efficient establishment for working these Forests. The demand for Vengay and other woods being considerable, I have no doubt, but that a fair revenue would in course of time be realized. The receipts of this year exceed the expenditure. In paragraph 6, Mr. Sperschneider is of opinion, that to work the Forests ourselves, is the best both as regards "Revenue and Conservancy," provided there is a market. I agree with him.

Appendix H.

68. Cuddapah and North Arcot Forests.—From the returns received, the receipts exceed the cost of conservancy, but fall far short of what they ought to be. If Government accede to my request to equalize the rate on Red Sanders, viz. 3 Rupees per bandy load both in Cuddapah and North Arcot, the returns from these Forests should not fall short of Rupees 15,000 a year, or show a clear profit of Rupees 10,000. I have every reason to believe, from the reports I have received, and from what I know of these jungles, that the above return would be obtained.

Appendix J.

69. *Mr. Spring placed in charge.*—Owing to the misconduct of the Assistant Mr. Morison, (now under investigation) the conservancy and working of these Forests has been delayed. The particulars showing how Mr. Spring was placed in charge, and Captain Beddome requested to inquire into Mr. Morison's conduct, have already been reported to Government.

No. 4 of 5th May 1862.

70. NELLUMBORE TEAK PLANTATIONS.—In December last I visited these plantations, and marked 20,000 saplings for removal, 20,000 were marked by Overseer Hall, and 10,000 by the Sub-Conservator Chatoo Menon, in all, more than 50,000 saplings have been cut, this will tend much to relieve the plantations, many of which were suffering severely from overcrowding, as detailed in my Report in May 1861.

Thinning of the Plantations.
No. 1,553, 5th August 1861. R. D.

71. *Scarcity of labor.*—Notwithstanding the extra grant of money, so emergent was the thinning work, that we were unable to plant one hundred acres as intended, only thirty were cleared ready for planting. Want of labor at the exact time of felling was experienced.

72. *Table shewing growth of trees.*—I append a table compiled, under my instructions, by Overseer Hall, from which the growth of the Teak tree, from seven to eighteen years of age may be seen; from this table will also be seen, how uniform the growth has been in the different plantations. In good soil where the trees had room, the rate of increase per annum in circumference averages, for first class trees 2 inches, second class 1½ inches, third class 1 inch.

73. *The Sub-Conservator recommended for a Pension.*—I regret to report that during the past year, the health of the Sub-Conservator Chatoo Menon, has been failing rapidly, and it became my duty to recommend this faithful and valuable servant of Government for a pension; but to obviate any delay in the current operations, I recommended the appointment of Mr. Ferguson as an Overseer; he was strongly recommended by Dr. Cleghorn as a good Forester. Mr. Ferguson was directed to proceed to the plantations as a temporary measure, and make himself thoroughly acquainted with the system introduced by Chatoo Menon.

Appointment of a European Forester.

74. *General operations.*—Every year sees the work increase, more plantations have to be kept clean, thinnings to be attended to, new ground to be cleared for planting, ripe Teak trees to be felled for sale, jungle woods of the more valuable kinds to be marked, thinnings to be floated to Calicut for sale, and lastly the rafts on the river to be watched.

75. *Proposed increase of present grant.*—In the coming Budget it was my intention to have applied for an increase of the present grant, as I considered it good policy to restrict our planting operations to a spot, where there is water-carriage to the coast. The price of Teak on the spot is nearly 100 Rupees the ton, and the locality as far as soil and climate are concerned, the most favorable in India for the growth of the teak tree. It is true we have had a difficulty about labor, but more energetic action, will this year no doubt remedy the defect.

76. *Financial results.*—The thinnings last year realized 4 Annas each all round, this year they should bring in a little more, say 5 Annas each, the trees being somewhat larger. Some old Teak to the extent of 7,500 cubic feet has been cut, this with the thinnings should realize at least 20,000 Rupees.

Major Babington's report shews a very small return for the year, which was calculated at 6,000 Rupees but has only reached 800 Rupees. His report is certainly a very "meagre one," he does not seem to have inquired or made himself informed, why so small an amount was realized. The sales were formerly conducted by the Collector's Department, but when made over to the Assistant, he should at least have inquired into the matter, nor does he give the estimated value of the wood on hand.

Appendix I.

77. *Felling.*—Felling is not carried on in the rains, the felling for clearing ground is done in November, nor is it necessary to float the timber at once, in fact the longer it remains on the bank, the fewer are the bamboos required to float it.

78. *Seignorage on trees.*—I am quite opposed to selling valuable trees on seignorage, where there is an Establishment to work the Forest, it is a simple way of saving the Assistant trouble and conveying the largest share of the profit in the pocket of the Contractor. Trees measuring 40 cubic feet were sold on stump fee for 10 Rupees; had we felled the logs and floated them to the coast, we should have realised at an outlay of 20 Rupees, at least 60 Rupees, or a profit of 40 Rupees, *versus* ten, on a hundred trees, this becomes a serious item.

79. *Commissariat Elephants.*—No doubt it would be an excellent plan to use the Commissariat Elephants when not required by that Department, it would be a saving to the State, and an advantage to the Forest Department.

80. *Boundaries and Survey.*—It is extremely important that the boundaries should be marked out, I have already brought to the notice of Government the necessity of a Survey.

81. *Charcoal.*—The Assistant's idea of burning charcoal when he complains of a want of labor in his legitimate occupation of extending the Teak plantations is untenable, further, he furnishes no data of any kind.

Appendix I.

82. *Style of Report.*—The style of Major Babington's report is unsatisfactory, there is a want of care in drawing it up; he altogether under-rates the value of the saplings, there is an immense demand for them for export to the Arabian Coast, and he should occupy himself with arrangements for floating them to Calicut, with the first freshes.

Return showing the age, circumference in inches at 6 feet from the ground, of eighteen Trees, viz., six largest, six middle, and six smallest trees in each yearly planting from 1844 *up to* 1855, *in the Nellumbore Teak Plantations.*

Year when planted.	First Class, numbered from 1 to 6 and their circumference.	Second Class, numbered from 1 to 6 and their circumferenee.	Third Class, numbered from 1 to 6 and their circumference.	Average height in feet from the ground.	Remarks.
1844	1 ... 40 2 ... 40 3 ... 38 4 .. 36 5 .. 36 6 ... 36	1 ... 32 2 ... 30 3 .. 29 4 .. 26 5 .. 24 6 ... 24	1 ... 20 2 ... 20 3 ... 18 4 .. 17 5 ... 16 6 ... 13	46 ...	On good soil, distance tree from tree, about 22 feet.
1845	1 ... 44 2 ... 40 3 ... 40 4 ... 40 5 ... 38 6 ... 34	1 ... 30 2 ... 29 3 ... 26 4 .. 25 5 .. 24 6 ... 24	1 ... 17 2 ... 16 3 ... 16 4 ... 16 5 ... 16 6 ... 16	48	On very good soil, distance about 18 feet tree from tree.
1846	1 ... 30 2 ... 29 3 . 28 4 . 27 5 .. 25 6 ... 24	1 ... 22 2 .. 19 3 ... 17 4 ... 17 5 ... 17 6 ... 16	1 .. 14 2 .. 14 3 .. 14 4 .. 13 5 ... 13 6 ... 13	45 ...	On good soil, distance about 18 feet tree from tree.
1847	1 ... 30 2 ... 28 3 ... 25 4 ... 24 5 ... 24 6 ... 23	1 ... 21 2 ... 21 3 ... 20 4 ... 20 5 ... 19 6 ... 19	1 ... 14 2 ... 14 3 ... 14 4 ... 13 5 ... 13 6 ... 13	40 ...	On general good soil distance about 14 feet tree from tree.
1848	1 ... 28 2 ... 28 3 ... 27 4 ... 26 5 ... 24 6 ... 22	1 ... 20 2 ... 20 3 .. 20 4 . 19 5 .. 18 6 .. 17	1 ... 13 2 .. 13 3 .. 12 4 ... 12 5 .. 12 6 ... 12	34 ...	On not very good soil, stony in places, distance about 10 feet tree from tree.
1849	1 ... 27 2 ... 24 3 ... 24 4 ... 24 5 ... 23 6 ... 22	1 .. 16 2 ... 16 3 ... 16 4 ... 16 5 ... 16 6 ... 15	1 .. 13 2 ... 12 3 ... 12 4 ... 12 5 ... 12 6 ... 11	40 ...	On very good soil, distance about 10 feet tree from tree.

Return showing the age, circumference in inches, &c (Continued)

Year when planted	First Class, numbered from 1 to 6 and their circumference	Second Class, numbered from 1 to 6 and their circumference	Third Class numbered from 1 to 6 and their circumference	Average height in feet from the ground	Remarks
1850	1 26 2 25 3 24 4 24 5 24 6 23	1 17 2 16 3 16 4 16 5 15 6 14	1 12 2 12 3 12 4 12 5 12 6 11	35	Not good soil, in some parts stony, distance about 12 feet tree from tree
1851	1 28 2 28 3 26 4 25 5 24 6 24	1 18 2 16 3 16 4 15 5 15 6 15	1 13 2 12 3 12 4 12 5 12 6 11	24	Some very good and some very bad soil, distance about 9 feet tree from tree
1852	1 20 2 20 3 20 4 19 5 19 6 16	1 15 2 15 3 15 4 14 5 14 6 14	1 11 2 11 3 10 4 10 5 10 6 10	28	Average good soil, distance about 10 feet tree from tree
1853	1 20 2 17 3 17 4 17 5 16 6 16	1 13 2 12 3 12 4 12 5 12 6 12	1 10 2 10 3 10 4 10 5 9 6 8	23	Average good soil, distance about 9 feet tree from tree
1854	1 20 2 19 3 18 4 18 5 18 6 18	1 16 2 14 3 14 4 14 5 13 6 13	1 12 2 11 3 11 4 11 5 10 6 10	26	Soil very good, distance about 9 feet tree from tree
1855	1 17 2 16 3 16 4 16 5 16 6 15	1 12 2 12 3 12 4 12 5 11 6 10	1 9 2 9 3 9 4 9 5 9 6 8	23	Soil good in general, distance about 9 feet tree from tree.

N B —These measurements were taken in January 1862

(Signed) E HALL,

7th February 1862 *Overseer, Forest Department*

Note—On comparing this Table with those drawn up by Brown of Arniston, Forester, page 428, it appears that the increase of the Teak is greater by twenty five per cent than that of the Larch, and is three times as great as that of the Oak The Teak at 18 years being 12 inches in diameter, the Oak at 20 years being only 4½ inches, the price of Teak and Oak is about the same, hence it follows that a Teak plantation must be three times as paying as an Oak plantation

(Signed) H R MORGAN

83. SALEM FORESTS.—The returns from these Forests are far more than even I anticipated, a profit of Rupees 42,947-3-8 being shown, besides Sandalwood in store to the value of 20,000 Rupees, the latter is, I think, too high a valuation

Lieutenant Ouchterlony's report, Appendix K.

84. *Accounts.*—Lieutenant Ouchterlony's account of the pay of the Establishment and working charges, is not very clear, and I should have sent it back for revision, had time allowed, but, as it only reached me at the end of May, I am compelled to submit it in its present state, trusting Government will excuse it, as much of the confusion that has arisen in the accounts was due to the sudden death of the Assistant, and the great delay that arose in obtaining sanction for the employment of a proper Writer and Establishment.

The Extra establishment was sanctioned, but Government declined to pass their pay until the sanction from the Supreme Government arrived.

In order not to lose the services of men collected with some trouble, I directed Mr. Blenkinsop to employ them on the work of forming Depots of wood, for Auction sale, and to pay them out of the grant sanctioned for working the Forests. Without this Establishment we should not have obtained half the results noted above.

On Mr. Blenkinsop's death, Overseer Yarde was left in charge of the Forests, and neglected to pay the men, though in justice to Overseer Yarde, I must say, he carried on the duties of the District very well, and I have already recommended him to Government for a portion of the Assistant's allowances, during the time he had charge of the District.

No. 790, 1st Feby. 1862.

85. *Lieutenant Ouchterlony assumes charge of the District.*—On Lieutenant Ouchterlony assuming charge of the District, I directed him at once to pay the men, as they had been employed on Government work, and the satisfactory returns of the year were principally due to their employment.

86. *Disarrangement of plans through the death of the Assistant.*—Mr. Blenkinsop having last year accompanied me in an extended tour, lasting nearly two months over the greater part of the Salem Forests, and having also this year accompanied me, to some jungles in South Arcot bordering on the Cotaputty jungles of Salem, was in full possession of all my plans, and was fully prepared to carry them out, his death in October last, just as everything had been got into working order, was a great blow, and has tended much to throw things back; still from the large returns, Government will observe, that the careful exploration, and systematic conservation and working of the Salem jungles has not been without good results, and next year I trust, that under Lieutenant Ouchterlony, matters will be improved.

87. *Depots.*—Lieutenant Ouchterlony has omitted to notice in his report, that the formation of Depots was a project already ordered.

88 *Establishment.*—The full Establishment having been sanctioned by Government, pending the sanction of the Supreme Government, that matter is arranged.

89. *Travelling Allowance.*—Travelling allowance at the rate of 60 Rupees a month has also been sanctioned, indeed, considering the great distance to be traversed in the Salem Forests, it is absolutely necessary.

90. *Houses.*—Small houses at Hurrúr and on the Munchy hills might be built out of the sum allowed for working the jungles, they would be very useful for the Officer, Overseers and others.

91. *Licenses.*—Salem is not yet in a fit state to dispense with Licenses.

92. *Stamp.*—Under the head of Stamps, Lieutenant Ouchterlony seems to have overlooked the fact, that none but printed Licenses were issued, a book containing several hundreds was kept by Mr. Blenkinsop, the system was as nearly perfect as possible, it was on the principle of a Check book, one-half in Tamil, the other in English. The Tamil half was torn off and given to the License holder, the other or English half remained in the book as a record. I had intended to introduce the same plan into Cuddapah, had the Collector approved of the Salem rules.

Appendix K

93. *Sandalwood sales.*—It could not be expected that merchants would go into the jungles to buy Sandalwood, and until brought into a town, such as Denkincottah, sales could not be effected. I had directed that tenders for the purchase of Sandalwood at Denkincottah should be advertised

for in all the District Gazettes, but not bringing the wood into Denkincottah, was clearly the cause of no buyers appearing.

94 *Nurseries.*—I have instituted a plan on a small scale for the planting out of Sandalwood trees at Sigúr, if successful, it can be tried at Denkincottah.

95. *Forest products.*—These at the request of the Collector were taken over by us at Denkincottah, next year probably the results will be better

96. DENKINCOTTAH FOREST.—In my report on the Salem jungles I particularly mentioned the Achawood* Forests, they cannot be worked, as you descend from Denkincottah by a paved Ghat at a gradient of one in four, the outlet near Pennagram, is up the rocky bed of a watercourse, over which even a wudder cart would fail to make way. I then explained that until a proper Ghat was made, these Forests could not be worked for anything but Sandalwood The timber cannot at this point be floated down the Cauvery, many miles lower down, perhaps floating may be practicable, but I am not aware that there is any valuable wood below Cauveryputnum.

Enclosure to letter No 440, 11th April 1861.
* Hardwickia binata.

97. CHENNAT NAIR FOREST.—I visited this Forest in December last, it is worked by the Railway on a lease of three years, and has been very serviceable to them in producing Errool sleepers It may be worth while at the expiration of the Railway lease, to locate an Overseer in this Forest, as from its proximity to Palghat and the Railway, a ready market for the sale of timber may be obtained.

98. CONSERVANCY.—In my last annual Report, I remarked that Conservancy was yet in its infancy, the system is every day getting into shape, and its advantages becoming manifest. The loss of North Canara has been a terrible blow to our financial condition, about one lac and fifty thousand Rupees of profit disappearing at once. Government in their Proceedings, No. 933 of 1st May 1862 have taken exception to the small returns of Conservancy compared with the outlay, and have called upon Collectors for their opinion, regarding the conservation and profits of certain Forests

To give some idea of the returns under the old system, Captain Hunter states the returns of the Wyánd Forests for three years to be Rupees 640, and this the first year of Conservancy, they amount to Rupees 5,389-13-9 The Collector of Salem, Mr. Brett complained bitterly of the destruction of the Salem Forest, under the old system, and a short time ago in a letter addressed to me, stated that as the returns from Licenses &c, were more than the cost of the Conservancy Establishment, that the taxes on wood should be reduced. I need hardly bring to the notice of Government the state of the Nullah mallais in Kurnool, where Conservancy is called for by the Collectors and others. In Madura and Cuddapah matters are not yet arranged, but from the former at all events, a fair revenue will, I have no doubt be eventually obtained, and the Forests conserved at the same time.

Appendix A

In the Sigúr Forest sandalwood was cut once in 5 years, and the returns were very small, whilst bands of Moplahs constantly made inroads and carried off large quantities; four years ago, I captured a band of thirty Moplahs in Sigúr Forest. The revenue has now risen to 20,000 Rs. and will for some years continue at this rate. Stealing has been put a stop to, and conservation attended to.

If Mudumallai Forest had not been worked by this Department, not a single public or private building of any size could have been commenced in Ootacamund, as the only Timber merchant in the place has not a log over 15 feet in length. Now that the system of Railways is being developed, and branch Tram-ways are about to follow, a small, but certain revenue must accrue from the conservation of all Forests: it will take years for many of the Forests to recover from the wholesale system of destruction to which they have been subjected.

Making the cutting of full grown trees compulsory is alone the salvation of some Forests, as in Salem and elsewhere, I have noticed the tendency to cut saplings, because the log just squared to a post or rafter. In many poor Forests the great end and aim was to prevent their total disappearance. To give Government an idea of what conservancy may do for the returns of a Forest, I mention the following facts which occurred a short time ago. Some two years ago, Captain Beddome then in charge of the Anamallais, recommended to Dr. Cleghorn, that he should supply a Mr. Bake with 75,000 cubic feet of Vengay at the bottom of the Anamallai

slip at 4 Annas per cubic foot. Dr. Cleghorn replied that as the distance was likely to be great the price per cubic foot, should be 6 Annas; fortunately he did not close with Mr. Bake, but agreed to supply the Railway with the above amount at the rate of six Annas per cubic foot. In November last, Mr. Bake came to me at the Anamallais and demanded his 75,000 cubic feet of Vengay, I replied, there was no contract with him. After Captain Brine took charge in December, Mr. Bake through Captain Brine again renewed his demand, and Captain Brine in several letters pertinaciously assumed the fact that Mr. Bake had a contract. I refused to entertain Captain Brine's view of the question, had I done so, Government will observe from the calculations below, how disastrous to the Revenue the result would have been.

To cut and deliver 75,000 cubic feet of Vengay at the foot of the slip, would have taken Captain Brine two years, as he did not in his year deliver more than 18,000 cubic feet of planks and logs at the foot of the slip, at a cost of eight Annas per cubic foot for supervision; the Vengay being only in logs I allow that he would have cut about double the amount say 37,000 cubic feet per annum which reduces the supervision to four Annas per cubic foot, and as he could not possibly have cut any Teak in those two years, Government would have lost two years profit.

As I consider that Government have a right to expect an annual profit of Rupees 25,000 from the Anamallais, then they would have lost two years profit or Rupees 50,000. The case then stands thus.—

CAPTAIN BRINE IN ACCOUNT WITH THE ANNAMALLAI FORESTS.

Dr.		*Cr.*	
To felling, squaring, dragging, carting, and slipping 75,000 cubic feet of Vengay at 4 Annas 6 Pice and Supervision at 4 Annas per cubic foot..	Rs. 39,483	By amount received from Mr. Bake for 75,000 cubic feet of Vengay delivered at the foot of the Anamallai slip at 6 annas per cubic foot.....	Rs. 29,375
To two years' loss of Revenue at 25,000 Rupees per Annum	50,000		
Total Rupees.....	89,483	Total Rupees... ..	29,375
		Loss...	60,108

Or sufficient to pay a Conservator for five years. There is not a single item on the debit side that is not under the mark. I do not think Captain Brine could possibly have deposited the Vengay at the foot of the slip for 4½ Annas the cubic foot, as

	As.	P.
Felling and squaring, is, per cubic foot.....	1	3
Dragging to road	1	0
Carting....	1	0
Slipping.....	1	3
Supervision..	4	0
Total, Annas .	8	6

With good management the above rates might have been sustained, but certainly not if Captain Brine's year is to be taken as a specimen; for instance the cost of his Elephants for the year was above 4,000 Rupees, he did not deliver more than 18,000 cubic feet at the foot of the slip, or the cost for dragging and slipping was nearly four Annas the cubic foot, instead of two Annas three pice.

I have, in the above calculation, allowed nothing for the seignorage on the trees which at 1-8-0 per tree producing a log of 16 cubic feet, 4,690 trees to make the 75,000 cubic feet or Rupees 7,035, or a total loss of 67,143 Rupees.

Had Captain Beddome's recommendation of four Annas a cubic foot been carried out, the loss to Government would have been much more, or nearly 77,000 Rupees.

99. SLEEPERS.—It is a question if the Railway will not have to return to wooden sleepers, it has been found at home, that the want of elasticity of the iron-pot sleeper destroys the rolling stock, and unless some method of obviating the damage be discovered, iron sleepers must be

abandoned. Travellers at home have given up their season tickets, sold their country houses, and returned to town, being no longer able to endure the concussion caused by travelling on iron sleepers There is also the liability to damage from salt-earth mentioned in my last Report

One cause of wooden sleepers not lasting, is, that under the chair a hollow forms, in this, water lodges, and causes rapid decay. A small piece of galvanised sheet-iron fitted over the part, would prevent the formation of a hollow.

100 MALABAR TEAK.—This wood for the use of Gun carriage wheels has been discontinued by the Superintendent, as it was found quite brittle. I have explained this to Colonel Maitland by showing him that he must have been supplied with girdled Teak. Good cross-grained Malabar Teak is superior to any wood for wheels. Girdling Teak has long ago been given up, it makes the wood birttle and deprives it of its oil

101 SATINWOOD.—Some of the finest Satinwood that I have seen any where, is to be met with near the foot of the Anamallais; this valuable wood is rapidly disappearing, under the cultivator's axe, I would recommend a few hundred loads being cut, and stored near the foot of the hills, it could be sent to Madras per Rail

102 TEA PLANTATIONS.—I have inspected the Tea plantations of Messrs. Mann and Rae, they are both being extended. Mr Thomas, the Collector of Coimbatore, made a mistake in supposing that a Tea tree should be five years old before plucking, the best Tea is made from three years' old trees. I have again to offer the remark that, I do not think, much land will be taken up unless the market value of the Tea is established, and Burgher holdings carefully defined.

103. WASTE LANDS—The numerous applications for Forest land that have poured in, has caused considerable embarrassment, where the opening up of the country is so desirable, it does not seem right, to refuse all Forest land, and I would again bring to the notice of Government, that unless ten to twenty per cent. of the land given is Forest land, it cannot be expected that any extensive cultivation of Tea or Cinchona will be tried In a letter addressed to Mr Thomas, Collector of Coimbatore, on certain applications for the Devi sholah, I remarked that it was not compatiable with the advancement of enterprize to systematically refuse all Forest land, for Tea or Cinchona, that I saw no objection to giving the land, provided the following conditions were observed.—That the Forest above 6,700 feet should not be cut, thus leaving a ridge of 450 feet to attract the rain fall, that for every bandy load of wood sold, one Rupee seignorage should be paid. These, I think, were fair conditions for both parties, and would whilst protecting Government from all loss, have encouraged enterprise. The first pioneers should have liberal terms Tea and Cinchona once successfully established, the conditions might be made more stringent

104. ASSISTANTS.—With the exception of the Annamallais and Cuddapah, I am well satisfied with the exertions of the Assistants.

105 OFFICE.—Native Surgeon F. Appavoo has conducted the duties of the Office satisfactorily. My Head Clerk Mr. Spring has also rendered satisfaction.

106. MAP.—A map by Captain Hunter showing the Wynád Forests accompanies this report, if it were lithographed it would be found useful and might be appended to the report.

107. NORTH CANARA.—This our finest Forest having been made over to the Bombay Government, I have but few remarks to make.

108. *Financial remarks.*—It appears that Mr. Muller failed to realise the value of his wood this year, but has accumulated a large stock in Depôts, which I have taken credit for in the receipts of the year, as timber made over to the Bombay Government.

Appendix L.

109. FINANCIAL REMARKS.—From the table above it appears that the net profit of the year amounts to the large sum of four lacs, twenty-eight thousand six hundred and thirty-nine Rupees with a stock of Timber, worth two lacs and sixty nine thousand Rupees, this is entirely due to the large amount of Timber transferred to the Bombay Government, on the making over of North Canara. If the North Canara profit is reduced to the same figure as it stood last year, viz. 1,74,754-11-7 then the results of Conservancy for the year, show as compared with last years a follows:—

	Rs.	A.	P.
Profit for 1860-61 . . .	1,83,731	10	9
Do 1861-62..	2,03,585	0	0

or an increase in the general Revenue of Rupees 19,853-5-3, had the Anamallais not exhibited such an extraordinary deficiency, the profit would have been much greater. The profits for the last 3 years then, taking the Revenue on the above data for a fair comparison will be as follows:—

		Rs.
	Receipts for 1859-60	1,98,294
See page under Anamallais.	Do. 1860-61	1,83,731
	Do 1861-62..	2,03,585

It will from the above be apparent that notwithstanding the Department has been saddled with the whole of the Military pay, making a difference of some 20,000 Rupees in the salaries for the year, that the general results of Conservancy are in favor of 1861-62, and had North Canara not been lost to us, I have no doubt, but that next year would have shown, increasing favorable results, for though the Anamallais exhibit a deficit of Rupees 20,000, still as I have explained some 3,000 planks, worth 90,000 Rupees were cut last year, at a cost of Rupees 42,200, so that in fact, if the whole of the Annamallai wood cut last year had been sold, there would have been a profit of Rupees 50,000 instead of a loss of 20,000 Rupees, this amount of profit will only appear next year, when the planks have been sold.

South Canara has slightly fallen off for want of a proper Establishment, this Forest as I have explained, requires to be systematically worked, to produce a fair Revenue.

Mudumallai Forest exhibits a slight profit, with a large stock of timber on hand, there is also an item of Rupees 6,000 due to the Forest by the Wellington Barrack's for wood supplied, but as the matter is still under inquiry, the Forest has not been credited with it

Sigúr exhibits a good balance and one that will annually be kept up.

The Neilgherries show a defecit due to the excessive cost of supervision, if placed under the Officer in charge of Mudumallai the balance will shew a fair profit.

Salem exhibits a large profit, and a good stock of wood on hand, the demand for every kind of wood in this District and the Railway passing through it, explain the large returns.

Madura shows a fair return, which as I have explained might be more than doubled, if the Forests are systematically worked.

Cuddapah the above remark applies also to these Forests.

Wynád, if the proposed amalgamation, of the Wynád and Hoonsoor Forests, is carried out, a handsome annual profit should be realized.

Nellumbore, the sales here were not effected by the Collector in time to appear in the annual returns, hence the apparent defecit and the large stock of wood on hand.

110. Concluding remarks.—What the Financial results of the present year will be, can only be approximately arrived at, the loss of North Canara will of course reduce them materially, still if the Neilgherries are placed under Mudumallai, the Annamallais, South Canara, Wynád, Madura and Cuddapah worked vigorously and the pay of the 1st Assistant merged into a Forest charge, the profit may probably amount to a lac of Rupees.

As I have no longer any records to refer to, much of this Report is written from memory, I therefore trust that Government will excuse any shortcomings that may be due to want of documents.

I have the honor to be,

Sir,

Your most obedient Servant,

(Signed) H. R. MORGAN, Major,

Late Offg. Conservator of Forests.

Financial results of Forest Conservancy. for 1861-62.

	Disbursements.	Receipts.	Balance in favor of Government.	Excess of expenditure over receipts.	Estimated value of Timber on hand.	Remarks
Anamallai	42,200 14 11	22,090 10 2	...	20,110 4 9	91,000 0 0	
North Canara	92,435 12 9	4,90,147 0 0	3,97,711 3 3	...	...	
South Canara	2,939 11 3	8,594 7 0	5,654 11 9	...	...	
Mudumallai	34,346 14 7	37,936 5 1	3,589 6 6	...	1,28,000	
Sigur	5,643 0 5	25,006 11 4	19,363 10 11	...	10,000	
Neilgherries	8,865 5 4	6,245 9 5	...	2,619 11 11	...	
Salem	7,515 10 10	52,124 14 8	44,609 3 10	...	20,000	
Madura	2,154 0 0	6,526 7 10	4,372 7 10	...	...	
Cuddapah	2,759 1 10	5,481 13 3	2,722 11 5	...	...	
Wynad	5,210 15 9	5,389 13 9	178 14 0	...	...	
Nelumbur	3,779 5 6	808 0 0	...	2,971 5 6	20,000	
Australian Plantation	1,473 6 0	...	...	1,473 6 0	...	
	2,09,324 3 2	6,60,351 12 6	4,78,202 5 6	27,174 12 2	2,69,000 0 0	
Deduct General charges.						
Pay of the Conservator, Office Establishment, travelling allowance, Contingent charges, &c.,		22,387 14 1				
Excess of expenditure over receipts		27,174 12 2	49,562 10 3			
		Net profit	4,28,639 11 3			

APPENDIX A.

Annual Administration Report of the Wynad Teak Forests for the official year ending 30th April 1862, under the charge of Captain A. Hunter, Acting Assistant Conservator of Mysore and Wynad Forests.

Wynád Forest Establishment why and when raised.—As this is the first Annual Report regarding the Wynád Teak Forest, I shall commence by showing why the Establishment was made. It appears that in the year 1858, the Conservator of Forests visited the Wynád Teak Forests for the first time, and considered them of such great value, and extent, that he recommended that an Officer should be appointed to traverse these Teak Forests, till a system of robbery and spoliation introduced during the last few years by certain trustees of certain ruined Devastanums was suppressed. To prevent the great waste of Teak &c., and to fix the boundary and watch it, the Government on the 18th September 1860 sanctioned the present Establishment, consisting of

1 Assistant Conservator	at Rupees	100	0	0
1 English Writer	at „	11	10	8
1 Duffadar	at „	3	5	4
1 Goomastah	at „	6	10	8
14 Peons	at 2 „	28	0	0

Being one-third of the pay of the Establishment, and amounting altogether, including Military pay, to Rupees 4,980 per annum. An arrangement was effected with the Commissioner of Mysore for the remaining portion of the salary and expenses of the Establishment. Captain Hunter, the present Officer in charge having raised the Establishment entered on his duties on the 22nd February 1861, and the result of his labours has been as follows :—

The extent of Wynád Teak Forests.—The Teak Forests in Wynád lie along the Mysore frontier, from Mudumallai in the South to the confines of Coorg in the North, a distance of about forty miles. The Belt of Teak on an average is about six miles in breadth. This Belt also contains an abundance of very fine Blackwood, Honah and Muttee. The central portion is the broadest and richest in Teak, it grows straight and to a good height, and contains fully fifty good teak trees to the acre. The Northern part of the Belt from Bowally to Coorg is narrow, but also very rich in fine teak In the days of Hyder and Tippoo, these Forests were worked to a great extent, there are good cart track-road and outlets to the Eastward, and timber is easily floated down the Cubbany river.

Waste of Teak.—Of late years and previous to Dr. Cleghorn's visit in 1858, any one who chose took prime teak from these Forests into the Mysore country, paying a small stump fee, either to the Tahsildar of Wynád or to the Devastanum representatives; but whether these fees were paid to the rightful proprietors is a very important question.

Damage done to the Teak Forests.—These forests were consequently much damaged not only from this cause, but from squatters and Cooroobus burning and felling the trees in large quantities yearly, for the purpose of cultivating Raggee.

Value of the Wynád Teak Forests.—The value of these Forests, is very great and in my opinion are now the first in importance, as Wynád will soon have outlets towards the West to the sea coast. In 1855 the price of Teak at Mysore was from 6 to 8 Annas a cubic foot, which gave the wood merchants who worked the Forests (as they chose) not less than 25 per cent. profit, and if taken to Bangalore fifty per cent. more. The Mysore Government, some five years ago, saw their mistake, and at once stopped this system of "Gooty Kanum," or stump fee and worked their Forests themselves, and now obtain at least one Rupee per cubic foot profit.

Price of Teak at Mysore in consequence of that Government taking the working of them into their own hands.—During the last three quarterly sales at Mysore, Teak* cut in the Forests which adjoin those of Wynad, the receipts per foot of first, second, third, and fourth class by auction quartorly has been on an average as follows :—

* Usual dimensions.
20 feet long 12 X 2
10 do 21 X 21
15 do 18 X 10
Branch pieces.

August 1861	at Rupees	1	9	3½	per cubic foot
December 1861	at do.	1	12	7	do.
March 1862	at do.	1	6	4	do

Present value of old girdled Teak in Wynád and amount sold.—Even with my small conserving Establishment during the dry weather, I have been able to work on contracts some of the Government Forests in this Belt of teak. I found that many trees, years ago, had been girdled, and would not last long. I obtained at different periods the following rates, and sold Rupees 5,389-13-9 worth.

In Kotheraycottah Forest .	at Rupees	0	5	2	per cubic foot.
In Koorcheat do. .	at do.	0	6	6	do.
In do. do.	at do.	0	8	0	do.

Expected profit, should Government work the Wynád Teak Forests.—This was a clear profit, as the Contractors had to fell, trim, and remove at their own expense, and the Railway demand is so great that I have no doubt that they would buy any quantity at the highest market price, if it was removed to Mysore.

Thus the value of Teak in these Fosests if worked by Government would, I should say, bring a profit of at least twelve Annas per cubic foot, and when the road to the coast is opened, a distance of not more than eighty miles, the profit would be at least one Rupee. The supply is immense and the Belt also abound in Blackwood, Anjley, Honah, Muttee, and Cedar, and as it pays Coffee planters to saw up the Blackwood on their estates, and to send it to the coast by coolies. I have no hesitation in pronouncing these Forests as about the most valuable in Southern India.

The tenure on which the Teak Forests are held.—The Teak Forests are contained in the Eastern Umshoms or Parishes mentioned in the margin, the Forests in the two former are escheats, as they belonged to the Pychee Rajah who was killed in the palace of Poolpully in 1806 as a rebel. Those in the two latter are partly claimed by some pagodas, and the question as to who is the rightful owner to the Forest Teak lands is now before Government. In the meantime all felling in these disputed Teak Forests is stopped. Colonel Wilkes, many years resident of Mysore, in his history of that country states, that the Rajah of Coorg obtained the whole of Wynád as far as Kulpatta as blood-money, and that the Poon was a royalty. Teak to this day is a royalty of the Nellumbore Rajah in the South of Wynád.

1 Moonenaud
2 .Ganaputty Vuttem
3. Illoolnaud
4 Poolpully dasum of Koopatode

Escheats.

Poon and Teak a royalty

Why Tippoo kept this Belt of Teak Forest as a royalty.—Tippoo evidently used this Belt of Teak Forest both for timber and as a barrier, in a Military point of view He erected forts along the Belt, and through it he had his only road via Sultan's Battery into Malabar, down the Tambecherry Ghát. At Moogoodoo or Moorgull there are three stones with the name of the (two) Rajahs and the Crest of the Honorable East India Company dated 1805, and the records of Mr. Warden, who was then Collector of Malabar, might be able to throw some light regarding the tenure and boundary of these Teak Forests.

Boundary Stones dated 1805 at Moogoodoo or Moorgull.

Why the Teak Forests were not declared escheat in 1824.—It would also appear that in 1824, Collector Mr. Vaughan did not declare the disputed portion of these Teak Forests escheat, the eastern boundary of which was unknown and, I doubt, if he

could have done so, as it was only in the year 1825 that the Trigonometrical Survey of Wynád was done by Captain Ward, and it could not have been published till long after The Eastern boundary of Wynád according to the said survey runs almost in the centre of the Teak belt, and this was done by Order of the Supreme Government, with a view I imagine to give Mysore half the Teak Forest and the Madras Government the other half; however, the claims now put up by the Devastanums are modern and it is only in the last few years that both the Mysore and Madras Governments have been made aware of the great damage and robbery committed in their valuable and extensive Teak Forests.

Boundary between Mysore and Malabar laid down by Order of the Supreme Government.

Resources of the Wynád Forests.—The following is a list of the Teak Forests in the Belt from Mooroogal or Moogoodoo in the North on the confines of Coorg to Tippoocaudoo in the South on the high road to the Neilgherry Hills.

Name	Resources.	Who claimed by.
Iyapenpara Kukary.....	Possessing teak in abundance.	By the Tiruelly Temple.
Kooteray Cotta .	Do. do	Government property.
Masaul . . .	Possessing but teak young. This Forest having been exhausted of prime teak.	Do.
*Susyvile, *Hoolhully, *Pambray, *Kaper, *Poolpully (Commonly called the Veddykynad.)	Possessing teak in abundance.	Claimed by Poolpully Temple.
Koorcheadoo, Kallymallay, Mungigal, Toromungal, Hurrygoonge, Echecoon (Commonly called the Veddykynad Escheat)	Possessing teak in abundance.	Government property escheat.
Edditoracottah, Kalamungul, Bene	Do but not easily to be got at.	Government property escheat.
Nardimallay . , Tippoocaudoo ... ..., Caroor	Do. easily worked.	Do.
Moodoomallai	Do. teak nearly worked out by Government who obtained it on lease.	Claimed by the Nellumbore Rajah but the Umshom is an escheat.

The above marked* are all I believe in the Veddykynad or North portion which is the central portion of the belt is from Bowally in the North to Edditoracotta or Ooscottoh in the South —See map

Government, I believe, ruled in an Order dated 24th August 1841, that the Forests in the Veddykynad was their property; but still, the Poolpully Temple puts in a claim now for a great portion of it and the Nellumbore Rajah claims a large portion of the Southern portion of the Belt.

Regarding Order of Government dated 24th August 1841. Writer has not got it and therefore cannot quote it in a detail

An idea of the resources of the teak Belt may be formed when, in 1855, the Trustee of the Tiruelly Temple offered to give Mr Williams for the Railway (under penalty in case of failure) three thousand Teak trees, one thousand of which were to be of not less than four feet in diameter and the rest not less than two feet from the Forest of Iyapenpara in the North (between Moogoodoo and Masaul) and he, the Brahmin Trustee estimated this portion claimed by him to contain ten thousand of Teak trees fit for immediate felling and several thousands of other useful timber trees, and Mr. Williams had no doubt he could easily fulfil the contract.

Resources of the Northern portion of the Belt Offer made to Mr Williams of 3,000 prime Teak trees in 1855

The consequence likely to arise if Forest teak lands are granted to Trustees of Temples.—The Temple Trustees have already done great damage to the Forests. If what they claim is granted they would sell all their Timber trees at once and then sell the land for Coffee (and it is the best in Wynád), but it is a fact that the large Coffee plantations between this part of the Belt claimed by the Tiruelly Temple Trustee and his own lands have been mostly granted to the Planters by the Government or by squatters, such as the Bagherry estate, the two large Pen estates, Oliate, Calipa, Dr. Magrath's, &c.

The claim of the Trustees of Temples modern and unfounded.—If the modern custom of these Temples, of having sold timber on stump fee of 8 Annas per tree to the wood merchant, without the knowledge of Government (Wynád being then a sealed book to all but the Tahsildar of the taluq which contain 16 villages and 1,160 square miles of land) is to establish a claim to the proprietory right, it will be found in the records in the Cutcherry at Calicut that the revenue derived from 1851 to 54 on account of Government, for felling at the same rate was Rupees 640 for 1,280 Teak trees. The records may go still further back, and may also show that Government exercised the same right as the Temples. I am unable to state in what forests these honest men cut, who paid the Tax to Government. The tax doubtless was often evaded, and Tahsildars in a wild Taluq like this, in olden days were not backward in allowing temples every possible liberty.

The difficulty in controlling the revenue when the taluq of Wynád was under a Tahsildar.—In November 1849 for instance Mr. Chatfield writes from Manantoddy to Mr. Conolly the Collector thus, "In respect to the difficulty of controlling the revenue every body now cuts timber as it pleases them and from the nature of the country it is most difficult, if not impossible to prevent such proceedings."

5000 logs of Teak stopped on the frontier by the Assistant Conservator till the right of felling is settled.

On the 5th October 1860 Government directed that no teak cut in the Belt should be passed into Mysore, till the question of ownership was settled, and I stopped at least five thousand logs, which are now lying, three thousand on the Mysore frontier and two thousand on the Wynád side worth fully one lack of Rupees as they now stand, at one Rupee per cubic foot. The claimants, wood merchants state they were cut in the forests of Wynád belonging to the temples but this remains to be proved. This shows what the resources of these forests are and the above must have been less than one seasons work.

They also state that they cut and removed a great portion of the timber before the order was published, but if this was the case the Mysore authorities would not have prevented the wood passing through the first Taluq. They would have been but too glad to do so to obtain the tax on Wynád Timber, and the wood merchants have tried their utmost to evade this order

Benefit arising from robbery of Teak being stopped.—In consequence of the robbery and spoliation of timber in Wynad being stopped, teak was sold at a fair price both at the Government Wood Depôt at Mysore and that of Madras at Mudumallai under Captain Gib, and I have even been able to sell some from the Wynád forests at eight Annas per cubic foot, the rate Government formerly got for a prime teak tree containing perhaps one hundred cubic feet.

Hoonsoor Commissariat Teak Forest much neglected and requires to be conserved.—I cannot in this report make mention in detail of the Hoonsoor large Teak Forests which is exclusively under the Madras Commissariat and worked by them, but it is highly desirable that it should be placed under the Forest Department, because the wasteful exhaustion of teak has not been stopped here. The Coorooburs revel in this Forest and have done immense damage and it is still going on. It is supposed that this Forest alone if worked under a systematic plan would give a regular supply of good timber to the State and the public. It has better means of communication than any in the Belt of Teak, and contains about one hundred and thirty square miles of Timber trees.

Means of Communication.—A glance at the map will show how rich in outlets the Belt is towards the East. With the exception of the main road in the North, these are good tracks and practicable for six months out of the year, from October till April and even May. From May to September the rains here are very heavy and the nature of the country and soil would stop carting, but this remark is not applicable to the roads leading from the main Depôts to Mysore if established as I propose at Antersuntry, Bagoor, and Koornajah. In fact towards the East they would be worked as easily as the present working Forest of Mudumallai. The Belt also enjoys the convenience of water carriage down the Cubbany river after the freshes, from Calavully and Susymallay to Humpapoor, a few miles from Mysore itself. Floaters are easily obtained at the latter place in Mysore. When Wynád is opened towards West, Teak timber could be sent down the Tamborcherry Ghát as easily as Coffee, from the Kootheray Cotta and Masaul Forests via Bawally and from the central Forests of Koorcheat &c. via. Sultan's Battery. The present track roads will require to be improved gradually and widened, as the Bamboo which surround all Teak Forest is very dense and chokes up their approaches. I am not yet prepared to lay out a plan of new roads for opening out the virgin Forests between Ediltorahcottah and Mudumallai.

Government Forest lands in Wynád not Teak.—These lands are principally contained in the four Umshoms adjoining the Teak Forests. They contain Blackwood, &c. and much bamboo land. In many places the land is well fitted for Coffee, the destruction of these Forests not containing teak for the *bona fide* cultivation of Coffee may be considered legitimate, but not so for Raggee, which spoil the land for ever from being cultivated for coffee. At least, if Raggee is cultivated on lands unsuited for Coffee, it should be done on a Puttah, with premission of the Deputy Collector and taxed at a low rate, and the present system of every man clearing and sowing Raggee where he pleases and paying no tax for the same should in my opinion be stopped This system is carried to a great extent in the Umshoms of Ganaputhy vuttum and Moonanád in bamboo and tree jungle. The Chetty cannot afford to pay a high tax for Raggee which is cultivated to feed his servants (or to pay them the rates of wages given by the planters) who cultivate the rice lands. The price of labor is so high that they might also be allowed a portion of land at a low rent on Puttah in case they are compelled to leave their holdings but the portion given should not be extended without taxation and a Puttah. The present system as I observed is ruinous to Government and no Nair or Moplah land holder would permit such wasteful clearings without being well paid for it. By Order of Government, dated 16th January 1862, No. 402, all Raggee cultivation in Wynád is taxed 2 Rupees per acre.

1 Moonanád.
2 Ganaputhy vuttum
3 Ellornaud
4 Poolpully dasum of Koopatode

Fitted for coffee cultivation.

Caused by Raggee cultivation

Raggee cultivation under no check or taxation.

Extent of Government lands in Wynád not known.—Government also possess some Forest lands towards Periat and Teriate, and in fact in several spots over Wynád, but I have been unable to find out their position, however, I have no doubt if they are well fitted for Coffee when applied for the real owner will be found. It is almost impossible to remove the squatters from them without a suit in Court.

Teak line natural Boundary of Teak Forest.—The line of teak is the natural boundary of the really valuable Forest, it will always grow and yield well on this Belt and every exertion is used to preserve it. I believe that the Coffee planters are most anxious to know where the Government lands are available for Coffee, but the question I fear is unanswerable till they are demarcated and fixed by competent authority.

Coffee planters anxious to know where Government Forest land available for Coffee are situated.

Increase of Wynád in Coffee plantations.—In 1858 Wynád contained (30) thirty Coffee plantations and now it contains upwards of one hundred estates. Europeans have greatly increased as well as labour and capital. Another great question to set at rest is the demarcation of the Teak Forest lands belonging to Government, as for instance, the extent of the Mudumallai Teak Forest, in the South of the belt, claimed by the Nellumbore Rajah is not known.

Map of the Teak Forests and the reason why the Government Teak Forests are not clearly laid down.—I have prepared a map of the Teak Forests in Wynád but the portions belonging to Government cannot be marked off till decided by competent authority. The Settlement and Survey parties have left Wynád, but what they have done towards demarcating and surveying the Government Forest lands, Teak or other Forest lands is not known.

Price of Forest Coffee-land in Wynád.—The Nairs towards the West are selling their Forest lands for Coffee planting at twelve Rupees an acre and one Rupee per annum quit-rent, which shows how valuable and how great is the demand for land at present and will give some idea of the value of Government land and the advantage that will be gained by having them demarcated and fixed for ever.

Population of the Teak Forests and their wants.—In the Teak Belt we have several bands of Coorooburs some of the Jani and others of Moolly caste they amount to about

Coorooburs	200
Gurcheas	50
Panniars and Pooliars	100
Chettys and Squatters	50

The former live entirely in the Forest. They are our only axemen, and without them it would be difficult to work a Forest. They do immense damage in clearing fine Forest for Raggee cultivation in fresh places yearly. The clearings are for many years after useless, even for Coffee. The destruction of useful timber trees is incalculable, but means have been taken to prevent this and this evil is now in a fair way of being put down.

It is one of my principal duties to put a stop to this "Takul" or Raggee cultivation in the Teak Forests, I have received prompt assistance from the Deputy Collector of Wynád Mr. Herbert Richardson in every case I have brought forward, and many Cooroobur and Chettys have been fined, some even to the extent of fifty Rupees.

Provision for the Cooroobur and Farm Slaves of Chettys or Farmers.—The Cooroobur through their Headmen are held responsible and the Chettys are also responsible for their Panniars or farm slaves. The practice would soon be put down if the Assistant Conservator was armed with powers to fine for such wilful waste and destruction of Government Forest, and which no amount of planting will counteract.

This power is allowed in Pegu (see Page 327, Rule 20, 21 and 22 in Cleghorn's Forests of South India).

The Cooroobur has no lack of labor. His services are constantly called for by the wood Contractor and the Planter. They will not leave their haunts in the Forests for any time, and if they must have clearings, it would be advisable to give each Headman a portion of land already cleared on Putta. Some arrangement of this kind might be made through the Deputy Collector, and the same might be allowed to the slaves of the Chettys who make this clearings in the Forest, near their rice holdings in the swamps. If we withhold the privilege of clearing for Raggee, these Chettys will be ruined and their servants will leave them,

under restrictions a piece of land might be granted, there are lots of old clearings near such holdings, and they have done what no Planter dare to, burning and felling the Forests in fresh places yearly, and will secretly continue to do so, till the matter is taken up by the Revenue authorities. I calculate that, at least, one hundred acres of Teak Forest is thus destroyed annually containing fully five thousand Teak trees, the evil has been in a great measure reached and I trust will soon be entirely stopped.

Damage done to the Forests by Cooroobura and Chettys' servants.

Fever and sickness in Wynád.—The months of April and May, September and October, before and after the heavy rains are the most sickly for fever, and during the rains it is with great difficulty my Establishment can traverse the Forests. The grass is there very high, leeches and flies abound, and in this large range there is not a single village, here and there one may meet with a solitary squatter or a small congregation of Jani or Moolly Cooroobura; but the Peons often find no shelter and dislike to move about in the wet season. I have lost one Peon from fever, and others have left very sick, almost in a dying state; others again have deserted and I find it most difficult to get men fit for the work on the salary now allowed, six Rupees per month.

Difficulty in traversing the Forests.

Sickness among the Peons.

Want of Medical aid and Medicines.—I may also observe that there is no Government Medical Officer at Manantoddy. A private Practioner, Surgeon G. Cream, is here, who has shown my Establishment every kindness in his power, in every way, as yet without any remuneration.

Contractors.—Most of the applicants for timber are wood merchants at Mysore, who have worked these Forests before they were conserved, and claim timber now lying on the frontier of Wynád and Mysore. I have therefore been obliged to be careful in accepting and framing contracts, especially as my establishment is small, a watching one in fact, and not yet on a footing to work the Forest to any large extent. The Contractors I find are ever ready to enter into contracts, and it is with the greatest difficulty I can get them to fulfil them.

Why more revenue has not been obtained.—The large extent of my charge and my duties in Mysore have prevented me showing more revenue. The Forests have been carefully watched, I am acquainted with their resources, outlets, extent, and value, the system of Takkul cultivation has been in a great measure stopped, the boundary has been laid down and all clandestine felling and removing of felled timber (till the rightful owner is known) has been stopped and guarded.

Progress made during the year.

Boundary between Mysore and Wynád.—The disputed portion of boundary eight miles, in length between Moogoodoo (the three stones and the bridge of Bawally) has been laid down. A belt of twenty-five feet having been cleared, on the 17th January 1862, I accompanied the party under Messrs. Stuart and Ricketts, and understand that when the line receives the approval of both Governments, I shall be directed to lay down the boundary Stones at every two furlongs and keep the Belt clean. These pillar stones are ready at Kakencotta. The whole boundary to the intersection of the three boundaries of Mysore, Coimbatore, and Malabar, will then be clearly defined and marked with the exception of a small portion between the fifth boundary stone in the vicinity of the Rampoor ford towards the Shegabetta tree (Trigonometrical station). I have had stones prepared for this latter portion and hope to lay it down next season. The party in 1859, with Dr. Cleghorn, were prevented doing so on account of fever.

Conclusion.—Should this Report be considered incomplete, I beg to mention that as I am also Assistant Conservator of the Mysore Forests, much of my time and duty has been taken up in that country, in supervising the working of their Forests, in traversing them to prevent robbery and spoliation. In making myself acquainted with their resources and outlets. In checking the tax on junglewood and also the illicit smuggling of Sandal-

wood. In marking out the boundary between Mysore and Malabar and looking after it. It will be observed that my Establishment is but a watching one, that the charge is a large one and gradually extending, and if separated into two, greater progress and check would be the result. Especially in the working of the Wynád Forests, the value and extent of which, I trust, is now well known. The Conservator of Forests, Major Morgan, proceeded on a tour of Inspection in the Wynád Forests and traversed them from the 19th February to the middle of March 1862, and in my monthly Progress Reports, full particulars of my proceedings during the year are given.

(Signed) A. HUNTER Captain,

Acting Asst. Conservator of Mysore and Wynád Forests.

APPENDIX B.

Mudumallai Forest.

Administration Report of the Mudumallai Forest for the official year 1861-62.

Financial results.—On 30th April 1861, there was an outstanding balance of Rupees 1,954-6-4, with this, Rupees 30,000 were first granted to work this Forest with during the year. Rupees 5,000 and 917-12-5 were subsequently received from the Annamallai and Sigúr Forests respectively, total Rupees 37,872-2-9, of this Rupees 34,346-14-7 have been spent; but in order to show the exact expenses incurred in working the Forest, a portion of the Military pay and allowances of the Assistant Conservator in charge, amounting to Rupees 3,127 3-0 which was not drawn from the Forest grant must be added. This gives a total of Rupees 37,474-1-7, while Rupees 37,936-5-1 have been realized by the sale of Timber &c. &c, and remitted to the Collector of Coimbatore; balance in favor of the Forest Rupees 462-3-6. But to arrive at the exact Financial state of the Forest it will be necessary to add to the above sum, the value of the Timber felled and squared during the year and now lying in the Forest as well as of that which has been carted and placed in Depôt at Tippacaudoo, Musnigoody, and Ootacamund, and still remains at those places unsold. Placing the low valuation of eight Annas per cubic foot upon the Timber in the Forest, twelve Annas upon that at Tippacaudoo, twelve at Musnigoody, and one Rupee at Ootacamund. Thus we have—

		Rs.	A.	P.
1,03,623½	cubic feet in Forests, &c.....	51,811	12	0
45,179	„ at Tippacaudoo.....	33,884	4	0
52,927¾	„ at Musnigoody.....	39,695	13	0
2,805¾	„ at Ootacamund..	2,805	12	0
	Rupees...	1,28,197	9	0
Add excess of Receipt and Expenditure.....		462	3	6
Add 2,041 cubic feet of Timber supplied to the Wellington Barracks at 1-4-0 per cubic feet.....		*2,551	4	0
	Gives Total in favor of the Forest.....	1,31,211	0	6

*This amount has not been realized in cash, because at the time of transfer of the Forest from the Barracks to the Forest Department, it was supposed the Forest was still indebted to the Barracks, Rupees 52,413-8-2; but the Board of Revenue have lately ruled that this was not the case in paragraph 8 of their Proceedings, dated 7th April 1862, No. 2,279.

This balance would of course be greater were a portion of the pay and allowances of the Assistant Conservator in charge debited against the Sigúr Forest, which is also under his care.

Roads.—No new roads have been opened, but the old ones have been kept in thorough repair, and three new Bridges have been made.

Coorumbers.—The Coorumbers have as usual been employed in felling Teak trees only, it being against the terms of the lease to fell any other. On two occasions numbers of them have run away, but as they had received advances most of them have been brought back The increased demand for labor in Coffee plantations where not only the able bodied men, but also the women and children find employment, is no doubt the great inducement for them to abscond, and this will always be a difficulty in Forest operations as it is impossible to employ the women and chidren.

Sawyers.—There are seven sets of Sawyers employed There is work for more, but they cannot be induced to come in consequence of the unhealthiness of the place.

Elephants.—The same four Elephants that were in this Forest last year are there still employed in dragging Timber. There was a fifth, but it being very young and too small for work was sold and the price realized placed to the credit of the Forest along with that of the Timber sold. Another sick Elephant which was sent from the Annamallai Forest in hopes that it might derive benefit from the change, died in March 1862. More elephants were much required, but until last month, when six Commissariat ones were obtained, could not be procured.

Bullocks and Carts.—The Bullocks have constantly been employed in carting Timber either to the Kurkana in the Forest or to the Depôt at Tippocaudoo. Twenty-five bullocks have been purchased during the year But unfortunately in March and April which are good months for carting almost all the Bullocks on the Establishment both old and new were laid up with sore mouths and feet, and this of course lessened the quantity of Timber placed in Depôt. Thirty-seven old and useless Bullocks were sold and the proceeds placed to the credit of the Forest with the Timber money.

Buffaloes.—The Buffaloes have, as occasion required, been employed in dragging and carting Timber.

Bandy Contractors.—Much of the Timber that is carted out of the Forest is taken by contract, but during the past year, the Contractors have given a great deal of trouble. They have been willing enough to take advances, but have been slow in working them off, and there is consequently a balance of Rupees 1,548-2-1 still against them, which they must work off in the ensuing year. For the future it is proposed to trust more to our own carts and bullocks and a number must be purchased. Provision for this has been made in the Budget estimate for the year 1862-63, and this is more urgent during that year as the lease expires on the 23rd March 1863, after which date all Timber left in the Forest escheats to the Nellumbore Rajah, the proprietor of it.

General Remarks.—The health of the Establishment employed in the Forest has been tolerably good. Of course, fever has at times prevailed, but not more so than usual in Forests. Great credit is due to Kistnappah, the Karkana manager, for the way in which he has conducted his most arduous and onerous duties. Until last month when unfortunately he had an attack it was supposed that he was constitutionally quite impervious to fever, and this peculiarity makes him invaluable for Forest work.

(Signed) W. A. GIB, Captain,
Asst. Const. Mudumallai Forest.

OOTACAMUND, MUDUMALLAI FOREST OFFICE,
5th May 1862.

APPENDIX C.

Sigúr Forest.

Administration Report of the Sigúr Forest for the official year 1861-62.

Financial Results.—During the past year there has been no felling of Timber in this Forest, but the Curumbers have been employed in the Suttiamungalum Taláq felling Sandalwood; six thousand Rupees was granted to work the Forest with, of this Rupees 917-12-5 have been transferred to Mudumallai Forest, and Rupees 5,050-7-4 have been spent, while Rupees 25,006-11-4 have been realized by the sale almost entirely of Sandalwood and remitted to the Collector of Coimbatore, leaving a balance in favor of the Forest of Rupees 19,956-4-0. There would have been a larger profit as there is still plenty of Sandalwood, but labor is not procurable owing to the unhealthiness of the District.

(Signed) W. A. GIB, Captain,
Assistant Conservator in charge of
Sigúr Forest.

Ootacamund, Sigur Forest Office
5th May 1862.

APPENDIX D.

South Canara.

On looking over former annual Reports forwarded by the Collector, I find that a description of the jungles placed under my charge have not been given, and as I consider such description necessary to enable you to form a correct idea of the supplies that may be expected from them, I beg to submit the following:—

Description of the Jungles in South Canara.—The jungles in this District bears no comparison to the jungles of Malabar or North Canara where there are large tracks of Forest uninhabited, and where, by making a single road, some three or four thousand trees could be got out. Our jungles are thickly populated, not by wild or wandering tribes, but by farmers, who carry on cultivation to a considerable extent, each farmer is allowed the space of 100 yards all round his fields, on which he is allowed to cut Timber and bamboos for his own use, free of all charge; besides this, there are several tracks of good Forests which are called Merchi wurgs (Pepper wurgs). The Ryot pays a Beriz on the wurg of five Pie per Pepper vine, I believe, but whether the vines are ever counted or not, I cannot say. When the Koomki land and Merchi wurgs are separated from the Government jungles there is but little left, and on this little, ripe trees are few and scattered. I may here state that I am at present engaged in girdling 1,500 trees of restricted timber, in the jungles in the Uppenangadi Taláq, and they are scattered over a track of jungle some thirty miles long, by five miles average width. Young trees are found in abundance, and with care there may be a considerable quantity of Timber got in this part some years hence.

Cassergode Taláq—This Taláq has been almost all under Coomry cultivation, there is at present nothing left in it except small tracks on the face of the Ghauts, and such tracks are unfortunately so situated that it would be very expensive to get Timber out of them.

Sooliah.—This jungle is situated partly in Cassergode and partly in Uppenangadi Talùq. There was formerly some good Teakwood in this track, but it is now exhausted, however, there is a quantity of young Teak and Blackwood springing up again, which are worth taking care of. During the year there has been 50,000 young trees pruned, all of which have a healthy appearance.

It is in this track of jungle that we have commenced to prepare ground for planting in. We have at present 6,000 pits dug, which I hope to be able to fill with plants during the rains.

Uppenangadi Taláq.—The greater part of the Timber and Bamboos cut yearly by the Merchants come from this jungle. Ripe trees of any kind are getting scarce; we have some difficulty in finding the number of trees required yearly.

Mangalore Talúq.—The jungle part of this Talúq runs along the face of Koodramuck, there is some good junglewood here, but restricted trees of any kind are few, the Timber in this part is comparatively speaking valueless. As there is neither road nor river leading from it, except at Naravu, where the Goorpoor river rises, at the head of this river we have some Poonspars, but merchants will make no bid for them, as they consider, that bringing them out, would be too expensive.

Oodipi Talúq.—From Mala to Andar the jungle is inferior, a good tree being seldom met with; it is in this track that the Sandalwood-oil stills are erected. From Andar to Someshwar (in the same Talúq) along the face of the Ghauts, we have some good Timber, the restricted kinds are Blackwood and Siripoona. There are five rivers running from this part to the coast; and there would be no difficulty in getting Timber out of this jungle, but merchants refuse to work it, as they consider it would be too expensive to bring Timber from there to the Mangalore market.

Timber supply.—I cut no Timber; I merely mark the trees, they are then given over to merchants who pay a seignorage of six Annas per Bombay candy on as many candies as they think they can cut and bring to the coast in one year, any Timber left behind is forfeited to Government, and sold by auction. The seignorage on Bamboos is eight Annas per 100. The following table shows the quantity of Timber and Bamboos taken to the Coast during the year.

Source of Revenue.	Amount.		
	RS.	A.	P.
3,756 Bombay candies, at 6 Annas per candy.....	1,408	8	0
30 Boats, at 3 „ per running foot..	115	0	0
2,51,915 Bamboos, at 8 „ per 100.	1,259	9	3
440 Sandalwood Stills, at Rupees 1-10-6 per Still..	728	12	0
Sale of confiscated Timber..	3	0	0
Timber supplied to Ryots by Forest Department....	10	3	6
Total Co.'s Rupees...	3,525	0	9

This table does not represent the whole of the Forest Revenue; the remainder is collected by the Collector and his Subordinates. The following are the different heads under which the remainder is collected:—

Timber supplied to Ryots.
Sale of confiscated Timber.
Firewood exported.
Seignorage on firewood, cut by Sandalwood-oil Distillers.
Seignorage on Charcoal, burnt by Iron Smelters and Blacksmiths.

As I receive no accounts from the Collector, I am unable to state the amount collected under the above heads.

Engineer's Department.—The Engineers cut their own Timber and pay the usual seignorage on it, so what they have cut is included in the above table.

Charcoal.—There is no Charcoal made in this District for sale; the Coast towns are suplied from the Malabar jungles. The Blacksmiths and Iron Smelters of the interior burn their own charcoal and pay a fee of six Pie per Moodah to the Potails of their respective villages.

UPPENANGADI
3rd May 1862.

(Signed) E. THOMPSON,
Overseer of South Canara Forests.

APPENDIX E.

Neilgherry Sholas.

There is not much pertaining to these affording new matter. The accounts show the receipts as Rupees 6,852-5-11* and expenditure as Rupees 837-6-5

Receipts & Expenditure

As the Establishment is chiefly kept up for the purpose of conserving the Sholas, in the vicinities of the large Stations, and not as in the various Forests, for cutting Timber, it is not to be expected that the expenditure will be met by the return.

The revenue from the Neilghiri Sholas, which embraces the Hill Stations of Ootacamund, Wellington and Coonoor, is derived from the following sources, *viz.*, sales of contract for firewood to these Stations, contract for sale of charcoal to them, a tax of Rs. 2 on each new house, and 1 Rupee for repairing every old house of the Burghers, and also fines from people caught cutting wood without permission.

Sources of Revenue.

The contract for sale of firewood to Ootacamund for 1861-62, was sold for Rupees 3,900, by monthly instalments of Rupees 325, but the sum realized only amounted to Rupees 1,625. The Contractors Messrs. Wilson & Co. reporting they were losing much money, owing to Mr. James McIvor not being prohibited from selling wood, which he felled on Government land, in the vicinity of Ootacamund.

Contract for sale of firewood to Ootacamund.

Charcoal Contract.—The charcoal contract was sold for Rupees 260, the contractor has afforded any thing but satisfaction, ever endeavouring to evade terms of the contract. The sales of firewood and charcoal to the stations of Coonoor and Wellington was sold for Rupees 2,400, by monthly instalments of Rupees 200, but the Contractor threw up his contract in January last, as he reported that the removal of the Troops from Wellington caused him to sustain a great loss, moreover in Coonoor very many parties, (generally Coffee planters) sell the felled timber off their plantations, to the people of Coonoor and Wellington; a practice, which it seems might be stopped, as the Government Pleader has stated that no Lessee can sever the wood from the land; were this once acted upon by an order of Government, it would prevent future misunderstanding.

Contract for sale of firewood &c to Coonoor and Wellington.

Wood cannot be legally carried off leased lands.

Burghers Houses	Rs	279	
Fines for cutting wood without authority..	,,	34	
			313

Burghers Houses.—The amount realised from Burghers for their houses new and old appears in the margin.

The firewood for the station of Ootacamund was procured from a large Shola, generally known as the Governor's Shola, situated (where the cutting was carried on) about seven miles from the Church The charcoal was burned in the Shola known as the Peria or Devy Shola. The wood for Coonoor and Wellington was procured from a large Shola, a continuation of the Shola, which the Barracks got a grant of.

Firwood where procured.

Nurseries.—As there was no regular conservancy Establishment previous to this year, every thing in the way of Nurseries &c. here, for replanting the Sholas had to be initiated. But in a small shola which during the preceding year had been rented to the contractor Madanah, and almost entirely cut down, 20,000 young plants, chiefly suckers of the *Acacia Molissima* were put down, and appears thriving very well, about 24 *Ecalyptus* plants also were planted, which also are growing very well. In the Nursery at this Shola, there are about 80,000 young plants of the *Acacia Stricta*, ready for transplanting as soon as the season admits of the operations.

Replanting Sholas

A small portion of the Governor's Shola has been pitted and will be planted as soon as the season will allow of it. A Nursery has been made in this Shola and a quantity of seeds of *Acacia Stricta* and *Molissima* and *Eucalyptus* sown, which are just coming up; and it is hoped will suffice to replant the Shola Much injury to the young plants arises from the cattle, which Burghers and Todars will persist in allowing to enter these plantations.

Replanting Governors Sholas

A portion of the forest cut down at Coonoor, has also been replanted with plants chiefly *Acacia Stricta* which are coming on well.

Subordinates.—With regard to the Establishment, Forester Friend has resigned his appointment and been succeeded by W. Taylor, late a private in the 3rd Battalion 60th Rifles. Forester Seffield has given great satisfaction by his zeal, willingness and energy in the discharge of his duties. Of the peons not much can be said, they are very far from being what they ought to be, and instead of putting a stop to depredations in the Sholas, it is much feared that they connive at these acts.

Kotagherry.—Nothing has been done as yet for Kotagherry, as without a watcher stationed there, no stop can be put to irregular cutting in the Sholas; an attempt was made to dispose of the sale of the firewood to the station to a contractor, but no one is willling to purchase the right, this seemed the only way by which a watcher could have been kept.

J. H. BABINGTON, *Major.*

Assistant Conservator of Forest.

OOTACAMUND, *9th May* 1862.

APPENDIX F.

WELLINGTON AUSTRALIAN PLANTATION.

The amount expended on these plantations is very small, viz. Rupees 333-6-0, this is owing to the sum of Rupees 2,500 sanctioned in January 1860 being expended, and the annual grant of Rupees 500 not having been received from the Collector, for want of instruction from the Accountant General, besides this, a sum of Rupees 692-7-3 was deducted by Captain Farewell (from the amount lodged in his hands by Dr. Cleghorn, for convenience, to be paid to the Plantation Overseer from time to time as it might be required); the claim was preferred by the Wellington Barracks for stores, reported to have been issued to the Plantations.

Amount expended.

From the above cause hardly anything has been done in the plantation, in fact since November 1861, not a cooly has been employed on it, as without funds it was impossible to carry on work. A sum of Rupees 100 was borrowed from the Nilghiri Shola Fund, and agreeably to the Orders of the Officiating Conservator of Forests paid to the Special Engineer of Wellington, towards the expenses of a new road, he is making along the southern margin of the ground for the plantations.

No funds—no work.

Rupees 100 borrowed and paid for a road.

The trees generally have improved greatly since the last annual Report; the Porcupines destroy a considerable number of the healthy young plants; the remedy for this appears difficult. A piece of ground has been selected by the Officiating Conservator of Forests for planting, during the ensuing year, which as far as soil and exposure go, ought to prove very good; hitherto sufficient attention does not appear to have been paid to these necessary objects; the aim in view apparently having been, to make the whole a continuous plantation, and poor soil twice and even thrice planted without success. In some parts the plantation requires thinning, but at present there is but small demand for the description of timber the thinnings furnish. A fringe of *Pinus longifolia* on the west side of the old plantation is very thriving, and it is much to be desired that this description of tree was more cultivated in this place, but at present no seeds are available. Though were applications made to Bengal, a supply could readily be procured.

Trees greatly improved.

Pinus Longifolia thrives well.

It appears that from the commencement of the plantation in 1856, about 106 acres have been planted with 2,40,000 young plants, chiefly *Acacia Stricta* and *Molissima*, but there are also a few *Eucalyptus* trees growing very well. The cost as taken from Dr. Cleghorn's reports,

Quantity planted and amount expended.

and what has been expended since the plantation was placed under charge of the Assistant Conservator, Nilgiri Shola, amounts to Rupees 12,617-0-7, but in this is not included Overseer Hall's pay of Rupees 80, and horse allowance Rupees 15 per month.

Government Gardens ought to supply plants.

The Garden at Ootacamund being kept up by Government, it is highly desirable that plants from it should occasionally be sent to Wellington, for trial in the plantations there, particularly plants of the *Coniferæ* tribe, for which Ootacamund may be too cold; at all events it would be worth the trial, having two or three dozens of each kind of the above genus, planted at Wellington: mention has already been made of the *Pinus longifolia*, which the Superintendent of the Botanical Gardens, Calcutta, reported as growing more luxuriantly than in its own locality on the Himalays.

Overseer

Overseer Hall has been as usual hard working and zealous, but in the plantation owing to the want of funds has been able to do but little, he has however not been idle, having looked after the Sholas at Conoor and planted a portion of one, which was cut down for firewood.

OOTACAMUND.
9th May 1862.

(Signed) J. H. M. BABINGTON, Major,
Assistant Conservator of Forests.

APPENDIX G.

ANAMALLAI.

I have the honor to forward the annual Accounts of the Anamallai Forest for the Official year 1861-62, countersigned by the Collector in accordance with Extract Minutes of Consultation, dated 12th November 1857 No. 1,153 paragraph 9.

2. The amount realized by the sale of timber to the Bombay Government during the past year is Rupees 18,086-14-6, The Madras Gun Carriage Manufactory has not been supplied with any Blackwood or other description of timber during the past year, no requisition having been made by that Department. The only other source therefore from which revenue has been derived is from the sale of timber to private individuals. The usual annual auction sale did not take place, there being no bidders. I purpose having an auction sale in the begining of next September, which a more convenient as well as healthier time of year. The aggregate receipts for the past year amounts to Rupees 22,090-10-2. The expenditure exclusive of the pay of the establishment is Rupees 32,448-12-11 making a total debit of Rupees 42,200-14-11. The expenditure for the past year therefore exceeds the assets by Rupees 20,110-4-9. The profit on the former years transaction was Rupees 14,166-2-6.

Vis Rupees 9,752-2.

I beg to remark in explanation of what may otherwise be deemed a serious falling off in the revenue returns of this forest, that during the past year no less than 2,046 planks 257 heads and butts have been cut, and are in progress of carting and slipping. This has of course involved an unusually large outlay, while the proceeds of the sale of the timber cut cannot be realised in the present official year; as the timber cannot be entirely removed from the forest to the foot of the slip, and to the floating station till after the month of May. Meanwhile there is a large amount of cut timber on hand which will, when sold realise a considerable profit. The cut timber of all descriptions now lying in the forest in course of transit from it and in Depot of Mungarah, the floating station, is valued at Rupees 146,403-8-10. Out of 3,000 planks estimated to be cut in the past year 501 were cut by contractor and 1,799 by the Forest Department.

3. The sum of Rupees 2,500 has been included in the charge on the estimate for the past year on account of the purchase of one elephant. This sum I expected would have been paid out of a fund of Rupees 10,000 formerly granted for this purpose and of

which a balance of Rupees 4,333-9-6 still remained unexpended The Collector however objected to the disbursement of Rupees 2,500 from this balance, alleging that the sanction of Government was requisite.

4. With the exception of 6 logs lying near the Depot at Perwarry no loss or damage has occurred from the jungle fires.

5. I have endeavoured in accordance with your instructions to entertain Mulsars as permanent labourers on a fixed monthly salary; but they will not work on those terms. Their disinclination to take the permanent service is the result of their now possessing lands of their own, the cultivation of which partly occupies their time; and the produce of which I imagine is sufficient to enable them to live free and unshackled. They never can be got to work for more than a few days at a time, being altogether a wild, roving, and most dissipated set. My predecessor Lieutenant Ouchterlony could not obtain any of them to work as sawyers. I will try what I can do with them when I resume my residence in the Forest.

6. On my return to the Forest I intend executing the following extensions of existing roads to enable me to cart the Timber about to be cut with greater convenience viz. Present Main Road to be extended 4 miles a branch to be made from it at Perwarry, about 5 miles in a westerly direction, and another branch some 3 miles towards the south. The reconstruction of the Timber slip on the plan devised by you shall also have my attention.

7. I have experienced both this year and the last great difficulty in getting the cartmen to faithfully fulfil their contracts. This I apprehend will always be the case so long as the work of carting of the Timber above and below ghat is placed in the hands of so many individuals. It results in, but comparatively a small quantity of Planks and Logs being got out of the Forest during the current year, and consequently small sale either at Ponany or elsewhere. While the amount of Timber cut and lying in the Forest for want of cariage is always increasing in quantity, but diminishing in value, being exposed to risk of damage by fires and to all the alternations of heat, damp, and cold.

To remedy this I would suggest that parties be invited to tender for the conveyance of of all the Timber requiring carriage. No Contract to be made for less than 500 Planks or part of that number to be Logs; and the whole to be completed in the current year under certain penalties, and good securities to be given. I would further suggest that instead of devoting the whole amount of the estimate for the ensuing year to the cutting of a large number of Planks, a few more Elephants to be hired to drag and slip the outlying Timber in the Forests so as to render it available for sale. A matter I conceive of some importance, now that the Railway is completed from coast to coast. The Elephants now belonging to the Establishment 6 in number would be barely sufficient for current work of the year's estimate.

Answered H. R. M.

8. The Bombay Government having declined taking any more Timber for Dockyard purposes, I would suggest that Teak and Blackwood might be advertised for sale in the Fort St. George Gezette. There is probably a large demand for it at the Presidency; and it could be conveyed there by intending purchasers by Rail.

9. I conclusion I beg to observe that I was absent on Medical Certificate for 6 months during the whole of the working season, and am therefore precluded from offering for your consideration or information, such remarks as might have presented themselves to to my mind during a personal Superintendence.

10. The following is a Comparative Statement of Teak Timber supplied to the Bombay Government for Dockyard purposes in the years 1860-61 and 1861-62, showing the increase or decrease in the number of Planks, quantity and class delivered; and the amount realised in each year. The rates being determined by the Collector of Malabar from their fair Market valuation.

Comparative Statement of Teak Timber supplied to Bombay Government for Dock-yard purposes in the year 1861-62, shewing the Increase or Decrease in the number of Planks, quantity and class delivered and the amount realised in each year.

For the year 1860-61.									For the year 1861-62									
Number of planks.	Class	Quantity. Koles.	Barrels	Vessels.	Rate per 100 Koles	Rate per cft.	Amount.		Number of planks	Class	Koles.	Barrels	Vessels.	Rate per 100 Koles	Rate per cft.	Amount.		
															Rs		Increase	Decrease
254	1st	19,363	3	4 75	..		14,522	7 3	160	1st	9,717	7	...	75	2-14-3	7,288	3	
123	2nd	7,405	4	2 60	..		4,443	3 3	89	2nd	4,855		9	70	..	3,398	8 4	
108	3rd	5,171	10	13 50	..		2,585	15 3	187	3rd	7,534	8	3	55	..	4,144	1 3	
55	4th	2,031	5	14 40	..		812	0 0	52	4th	1,667	1	2	50	..	833	8 9	
24	5th	744	4	6 30	..		223	4 11	8	5th	226	...	4	35	..	79	1 5	
92	Inferior	4,442	3	3 25	..		1,110	9 1	192	Inferior	9,373	11	4	25	..	2,343	7 9	
656	..	39,158	7	10 ..		...	23,698	1 3	669	...	33,374	4		...	..	15080	14 6	5 611 2 9

KOTAGHERRY,
10th May 1862.

(Signed) J. J. BRINE, Captain,
Assistant Conservator of Forests.

APPENDIX II.

MADURA

I have the honor to submit my second Annual Report, shewing the Forest operations of the Madura District, during the official year 1861-62.

2. The operations in the Forests have been principally confined to the marking of full grown trees, which are fit to be felled and selling the same to the public.

3. The Forest Revenue of this Disirict is a mere trifle compared to that of the other Districts. The receipts of the past year amounts to Rupees 6,526-7-10, which shews an increase of Rupees 3,958-2-9, to that of the previous year. Besides there is on hand timber which may be valued at Rupees 420, whilst the expenditure, including the cost of the fixed establishment amounts to Rupees 2,154, thus leaving a profit of Rupees 4,372-7-10, in favor of Government.

4. The trees felled comprehended various kinds of superior jungle wood as well as teak and blackwood, but of all the indigenous trees, Véngé *(Ptero carpus Marsupium)* has been most greedily purchased by native traders from Trichinopoly and Madura, as the well grown timber of this kind is greatly prized for house building purposes.

5. There has been a great demand for Bamboos also; the total number of bamboos cut during the year both small and large amounts to 1,04,145. The bamboo Forests are confined to two places, Kumbum and Virupatchi Hills, the demand for them is very great at certain times in the year.

6. There can be no question as to the advantage of Government working the Forests and sell the timber at regular Depôts by Public Auction. By so doing a better and a more careful system of Forest Conservancy would be introduced and Government derive an increase in the Forest Revenue.

7. Punakád cultivation is still practiced I am sorry to say in the unfrequented vallies and on the slopes of the Hills at Kumbam without the knowledge of the Revenue authorities. The past year has been one of famine arising from the failure of the dry crops, this appears to have led the Ryots of the plains to adopt this practice as a means of livelihood.

8. I beg to forward a receipt to show that the amount noted in the account current has been duly credited to Government in the year under Report.

OVERSEER'S OFFICE, PERIYAKULAM, (Signed) E. SPERSCHNEIDER,

5*th May* 1862, *Forest Overseer.*

J. H. LEVENGE,

Collector.

APPENDIX J.

CUDDAPAH AND NORTH ARCOT.

I have the honor to submit my Progress Report for the month of May 1862, so far as it appertains to the North Arcot District.

2. *Kircumbaddy.*—This place forms the most convenient junction for all roads from Cuddapah and that portion of the North Arcot District where the red Saunders abounds. From twenty to thirty bandy loads pass daily through the Kircumbaddy valley, containing different descriptions of timber, chiefly the red Saunders. This valley is being deforested with great rapidity, and if strict vigilance is not exercised, the already impoverished Forests will disappear, and the ryots will not only suffer from want of fuel, but the climatic effect may be disastrous.

3. I stopt several bandy men and demanded their passports, they did produce such a document in Telugu, but these were all signed by the headman or Manager of the village. Government in their Proceedings, No. 1,261 of 27th June 1861, Revenue Department, desired that the jungles in the District of North Arcot, contiguous to the Cuddapah border, should be placed under the charge of the Conservator of Forests. What attention has been paid to these instructions is beyond my means to discover! There is not one peon, so far as I can ascertain, that regularly belongs to the Conservancy; there are few men belonging to the Collector's Establishment, engaged not to guard the jungles from spoliation or wasteful cutting, but as tax-gatherers, a proceeding which will materially thwart the object Government had in view when sanctioning the creation of this Department.

4. *Red Saunders.*—In paragraph 2 of your letter to the Board of Revenue, No. 533 of 24th June 1861, you state, that there is no difficulty about the seignorage, as the value of a bandy load of red Saunders at Madras is from 40 to 50 Rupees. This assertion is quite correct, so far as the question appertains to the Cuddapah Forests, and while I admit the justness of these premises on the one hand, you will allow me to hold to the conclusion that the Collector of North Arcot is also correct in stating that the red saunders in his District is not sufficiently valuable as an article of trade to bear the proposed seignorage of Rupees 6 per bandy load.

5. The above will appear at first view incongruous, but this incongruity will admit of an easy solution. In the Cuddapah Forests, the red saunders may be had in any quantity, of a superior quality both in logs, which are converted into posts for houses,

and which the Natives prefer to any other timber as well as in pieces and roots for export as dye A bandy will contain from 20 to 25 converted logs, which at Madras readily fetches from 2 to 2½ Rupees the log, then 20 logs × 2½ Rupees 50 Rupees

In North Arcot, the red saunder tree is of a very inferior description and unsuited for posts, the roots, therefore, are the most sought for the dye, and even these, in a commercial point of view, will bear no comparison to what may be had from the Cuddapah forests hence the objection of merchants to pay so high a rate of seignorage as Rupees 6 per bandy load Two and half candies, equal to 1,250 pounds go to a bandy and a candy at Madras sells for Rupees 6, then two and half candies × 6 Rupees 15 Rupees

6 Your decision, therefore, to strike the average and assimilate the rate of seignorage, viz, Rupees 3 per bandy load, both in Cuddapah and North Arcot, and which I hear the Collector of the latter District has concurred in, is not only judicious but extremely just, and this proceeding will, I have no doubt, yet afford means of subsistence to a large portion of the "dangerous* classes," and who these are I have not yet discovered

* Vide Proceedings of Government, No 1,261 27th June 1861 R D

7. Should you deem further information necessary, I shall again resume the subject after I have made myself further acquainted with it, but before I draw to a close, I would solicit of you to make such arrangements in communication with the Collector of North Arcot for placing the jungles in question under your control, as I feel that it is not a matter of seignorage alone but of conservancy The question, however, that presents itself is, that, were these jungles placed under your charge, how I am to carry out your plans without an Establishment The Collector, I have no doubt, will remove his men or ask you to take them over on your Establishment I fear nothing can be done till the close of the present official year, unless you obtain permission for the Collector to make over to this Department that portion from his Budget estimate, where such salaries are provided for This I shall leave for your better judgment to work out

8 One hint I would beg permission to throw out for your consideration but do so with diffidence, as I am unable, till officially announced as your Assistant in this District, to obtain accurate information I have, however, casually learned that the headman of each village in North Arcot is allowed *twenty* per cent on *all seignorage* collected by him on the different descriptions of timber, but this, I respectfully maintain, was only intended to be charged on *fuel, firewood* and *bamboos*, as per Section 10 of Circular promulgated by the Board of Revenue, No 5,497 of 27th November 1860, laying down rules for the preservation of the jungles in the Provinces If such be the case, what guarantee is there that these men will act honestly while so many instances of extreme accessibility to venality and corruption has often been exemplified by uneducated natives Will an appeal to their fears, by declaring them liable for any misappropriation or malversation to the penalties provided in Regulation IX of 1822 keep them honest? I trow not, were only a hundred Rupees collected in North Arcot, twenty per cent on that sum would maintain four peons at 5 Rupees each per month, who would patrol the jungles and maintain conservancy

(Signed) THOMAS SPRING,

Acting Asst Conservator of Forests in charge

BALPILLI,

7th May 1862.

APPENDIX I.

Nellumbore Teak Plantations.

The report of these is necessarily meagre, the Assistant Conservator having only been placed in charge of these on the 13th of March 1862, when he immediately visited them and found that about 30 acres of ground had been cleared, and was having the felled timber burnt off it Several logs of Venteak, Errool and Kurramurda had been laid on the bank of the nullah, to be floated away with the freshes At that time much difficulty was experienced in getting Coolies, as some early rain had fallen and all parties were busy in sowing grains.

Quantity of ground ready for planting.

The Receipts by sale of timber, &c.. according to subjoined Memo. amounts to Rupees 808, and expenditure to Rupees 5,358-10-2. This is certainly far from satisfactory, but it is hoped now that the plantations. &c., are under an Officer, a more satisfactory return will hereafter be shown.

Receipts and expenditure

49,705 Saplings were cut in thinning the plantations, but the sale of these will not bring much, in fact many are not worth the carrying away

Saplings cut

The hot weather is the unhealthy season in that part, and felling, &c., is only carried on in the rains, the timber being at once floated down to Calicut.

Hot weather the unhealthy season.

There are extensive Forests in the vicinity of Nellumbore which are leased to Government for future planting operations; two of these have no water carriage for the timber, and before any cutting can be profitable in them, a road to the river would require to be made. Hitherto it has been usual to sell standing trees, exacting a certain seignorage, a plan which appears to answer, though perhaps the seignorage charged may have been too little. With regard to the valuable timber, such as teak, &c., growing within reach of the streams, it would be better to cut them for Government. A difficulty exists with regard to having these conveyed to the river; as when in flood every available Elephant is engaged by parties who desire to get their wood to market, this causes the hire for Elephants to be very high. It is therefore proposed that some of the Commissariat Elephants at Calicut, and Malliapoorum, be employed at Nelumbore on the above work, this would be of service to these Elephants also, as forage for them is more easily procured at Nellumbore, than Calicut. A shed would have to be erected for them, but that might be easily run up It is hoped that this suggestion will be acted upon, and application made for the services of 3 or 4 Elephants.

Seignorage on trees

Commissariat Elephants wanted

An intelligent Forester, by name Ferguson, has been engaged for the Nellumbore plantations; he is an experienced man in his profession, having been engaged in it many years in Scotland. He is not in the regular establishment, but it seems very desirable that Government be solicited to appoint him at once as Overseer, in the same manner as Overseer Hull was appointed. He ought to be permitted to reside in Calicut, during the most unhealthy months of the year, paying occasional visits to the plantations.

Forester Ferguson.

The Sub-Conservator Chatoo Menon has not yet been pensioned, as some delay is experienced in filling in the required papers.

Chatoo Menon.

As soon as Chatoo menon leaves, there will be no person left to point out the boundaries of the various Forests leased by Government at Nellumbore, therefore immediate application should be made to Government for the service of a Surveyor or two, to survey and mark the boundaries The monsoon being the healthy season at Nellumbore, and no work it is believed being carried on by the Revenue Survey in Wynád, at that time no difficulty ought to be experienced in procuring a couple of Overseers.

Boundaries to be pointed out and Forests surveyed

The present return of the Nellumbore Teak plantations undoubtedly must appear unsatisfactory in a monetary point of view; but sanguine hopes are entertained that under present management, the next return will be more satisfactory. It is proposed that in future instead of burning off wood and clearing for fresh plantations, most of the wood be burned in the charcoal, for which there is a very large demand at the Beypore Iron works. Should this experiment answer, a considerable amount should be shown in future returns under this head.

Return satisfactory

The aspects of the plantations continue as flourishing as ever, the Scotch Forester Ferguson above alluded to, was perfectly astonished at the appearance of them, declaring he had never seen any plantations in Scotland to be compared with them. There are about twelve lacs of young healthy trees in the plantation.

Planting very promising

Another storm of wind has just occurred which has caused some damage to the plantation especially to that of 1844, or the one first planted.

Storm.

OOTACAMUND,

17*th May* 1862.

(Signed) J. H. BABINGTON, Major,

Asst. Conservator of Forests

APPENDIX K.

SALEM.

In submitting my annual report on the Salem Forest for your information, I have the honor to state that inconsequence of my not having been in charge longer than 2½ months of this year, I have not been able to explore the district as much as I should have directed, my attention having been almost entirely taken up with examining the working of the Sandalwood Forest

Establishment.—This you are aware consist of, 1. Assistant Conservator, 2. Overseers and, 12 Peons totally inadequate to the immense tract of country in my charge, to remedy this evil an extra establishment is kept of 1 Writer 3 Gomastahs 6 Pygusts and 39 Peons. The writer is attached to the Assistant Conservator's office, the Gomastahs are employed as Assistants to the Overseers, who without their aid could never do their work, the Pygusts or in other words Duffadar are employed in continually making tours to all the outposts in the jungles; since I took charge I have ordered these latter to send in weekly Reports on the work they have been employed, which it seems was not the custom heretofore.

The sale of tickets &c., still continues brisk, the tickets for Bamboos and firewood are chiefly in demand. Besides selling these ourselves I have distributed a few to the different Government officials in various district for convenience of villagers who live far off. When it becomes generally known that these tickets are easily obtained I am confident the sales of them will be greatly increased. Each license is restricted to 25 cartloads of timber valued at 50 Rs. Now a great many people who have applied to me for a less number to build houses or do small jobs of their own. But as the Officiating Conservator before remarked in a letter of his to the Overseer, that it is much easier to look after 1 cartman, than 25, which is true, at the same time it is a great drawback to the villagers, ryots &c., being supplied, and a great inducement to them to commit constant robberies, which otherwise they would not attempt so that I would recommend that issuing of licenses be discontinued and that we cut our own timber and have periodical auction sales of it, notifying the same in the Gazette previously, this would be very acceptable to the villagers and

towns people and meet the wants of both the rich and poor to one would then be permitted to enter the forest for the purpose of cutting timber and I am certain there would be less damage done to the Jungles.

Offenders.—When a man is found bringing away or having in his possession timber cut unlawfully the timer is seized this taken before a Magistrate to be prosecuted this not only detrimental to the work but interferes in a great measure with the duties of the various officers this might also be prevented by discontinuing the issue of Licenses.

Stamp.—I propose having a stamp for the office for stamping Ticket issued, a plain one easily distinguished by the peons at a glance, this is essentially necessary for at present I am given to understand spurious imitations of ticket are made and issued by private parties for it known one individual as tahsildar who wrote them himself sign and sold them, remitting the proceeds to the treasury and reporting to me that he had done so. And if the ticket were stamped and it was made known to the District that no ticket unless stamped would be passed by the Forest peons, there would be no way of evading the duty except by means of forged stamp.

Saplings.—Of all descriptions are sprinkled over the jungles and on the Munchee Nugherry Hills about that district they abound and I have found teak suckers growing from old stump some of them 1¼ foot in diameter clearly showing that those localities are favourable to the growth of this valuable timber.

Bark.—The bark mostly taken out of the jungles this year was the Vel Vaylum or Vaylum bark by a contractor, who in the previous year obtained the contract from the late Assistant Conservator, his contract will expire in the 1st June 1862, and if the Forests are to be protected this person contracting for the bark, should not only be bound down to *our* rules which it seems he has not been hitherto, but also made to lodge a heavy security in case he should transgress against the rules laid down by the Forest Department I do not make this proposition without having carefully weighed the matter, when the contract is again open to competition should *no* contractors come forward we can supply numbers of distillers with the quantity of bark they require in small or large quantities which would be very acceptable to them.

Sandalwood.—The sale of this year has unfortunately been most unsuccessful, the only causes I can ascribe it to be are partly the weather preventing cartmen going to the Depot to bring it into Denkencotta and the short notice given to buyers which prevented many attending. The Poojalies are the men employed on this work which only last a few months of the year, they work very laboriously and cheap by felling, cleaning, shaving and cutting into 2½ billets 3½ maunds of 25 ℔ each for one Rupee and bringing the same to the nearest store, so that we have only to cart it from the Hills to Denkencotta.

Nurseries.—I have selected some suitable sites for nurseries where it would be well to commence planting out S. W. trees the saplings could be brought from the jungles and planted say 10 to 12 feet apart. The expense might be tried first as a small scale to see if it answered, my only fear is want of rain for two or three months in the year, but to remedy that I would employ Poojalies to send and water them and as they are hardy trees when once they have fairly taken root they will require no further attention. I am given to understand our Sandal wood is far superior to the Mysore and ought therefore to command a good price in the market. As we were not able to sell any thing at our last auction I would propose notifying in the Gazettes of the Presidencies what amout of wood we have in store available for any Merchant who likes to come forward and make an offer for it through their Agents here.

Forest Product.—When the Sandal wood season is over there are a few months when the Poojalies are out of work and naturally look to us for employment I find the Overseer at Denkencotta has been employing them during that time in collecting Honey, Wax, Dyes, &c, which when sold recover a very fair remuneration so much so that I have no hesitation in saying if matters were better managed and another system introduced the proceeds of the sale of Forest product such as Honey, Wax, Dyes, barks, &c. would of itself

pay the expenses of working the Forest, leaving the proceeds of the remainder viz., timber a clear profit to Government.

Denkencotta Forest.—This is the principal seat for our work at present and if during the ensuin g year of 1862-63 we confined ourselves entirely to this side in the manner I have already described I am certain we shall be amply repaid for our trouble. These are by far the finest Jungles we have in the whole of the Salem District and every year we neglect to go and work them thoroughly, the more they are getting destroyed. During my late visit to these parts I observed a great deal of damage done, numbers of young saplings of all kinds cut down splendid large and valuable trees felled left lying rotting in the ground. All along the banks of the River Cávery some fine trees are growing in the dry season these could be felled and trimmed (not squared) then cut into portable lengths and floated down the river in monsoon to the village of Seringum (near Trichinopoly). I have not now time to explore this river but when I was at Hognakulum on the banks I heard that the Natives there about were employed in great numbers making Bamboo rafts and floating these and small spars to Seringum by water, below the falls. If you should think this worth while I will go down the river, report more fully on its capability for this work, when the season is favorable.

Accommodation.—I was sorry to observe on my arrival that the Assistant Conservator had *no* Bungalow for his use in any part of the district convenient for him that he might occupy as his Head quarters. At Harúr there is a Chuttrum, a building formerly used by the Natives of that place, built without any regard to ventilation, accommodation or healthiness the only part of it available for my use is a room about 18 or 20 feet square facing the west and unbearable after 5 P M. another part of the building is occupied by a Police guard and a Prisoners room. I would earnestly request sanction may be given to build a large and roomy Bungalow at Harúr, and if operations are to be recommended on the Denkincotta division this ensuing year that another be erected on the Munchy or Kodgherry Hills the reason of this latter request is that should I or any of the Overseer or others fall sick they will have a healthy place of resort, whereas at present there is absolutely no place for the Assistant Conservator to go to recruit himself should he get sick.

Account.—These I am sorry to say are at present in a state of great confusion. I cannot account for it in any way but saying that since I joined I have not had the time I require to look into and settle every thing. You will observe towards the close of April I drew the balance of the estimated sum, this sum was absolutely necessary to pay up the arrears of pay due to the Extra Establishment. It is easily explained why this was not done before. On the death of the late Mr. Blenkinson, the Overseer who had charge not having authority to draw out the money from the Treasury for this purpose naturally allowed it to remain unadjusted until my arrival when reinformed of the circumstance and I communicated with you on the subject and got orders to pay them up As this was a work of time I could not wait but hurried off to Denkencotta and on my return to Harúr found I was urgently required in Madras It is a great pity that these people have not received their pay like the others regularly every month their entertainment was absolutely necessary, and by this delay they have become discontented and should they leave on receiving their pay will deter others from entering the Department.

Profit.—On 30th April ending the year 60-61 I see the accounts shew a collection of Rupees 17,359-15-0, deduct working expenses and contingencies, Rupees 4,285-11-10 which left a balance in favor of Government of Rupees 13,064-3-2. The past year shows a collection on tickets timber, &c., of Rupees 52,124-14-8 deducting working charges &c, Rupees 9177-15-0 and there remains a balance of Rupees 42,947-3-8 this is easily accounted for as I have already informed, as 2 thirds of the Establishment have not received their pay for 7 or 8 months and besides this altho' Rupees 1,050-0-0 was expended in working the Sandalwood Forest although none was sold this *year*; yet Government are not losers for we have nearly 20,000 Rupees yet and more I think in store.

Travelling.—I request I may be permitted to draw travelling allowance and that the same may be allowed for those who accompany me through the District either monthly or

per mile. I have since my arrival been put to a great deal of inconvenience in consequence of not drawing this allowance.

Estimate.—I find the sum of Rupees 5,000 have been granted for the working of the forest for the ensuing year, this I am afraid will run far short of the work on account of the sum of Rupees 1,776 being arrears of pay due on the 30th April 1862 to the Extra Establishment.

(Signed) J. W. OUCHTERLONY, Lieutenant,
Assistant Conservator of Salem Forests.

SALEM, 20*th May* 1862.

APPENDIX L.

NORTH CANARA.

I have the honor to submit my accounts for the official year 1861-62.

2. The Account Current shows Rs. 89,678-10-7 in the receipts, and Rs 92,435-12-9 in the expenditure, leaving a deficit of Rupees 2,757-2-2.

3. The Memorandum of Wood unaccounted for shows the stock of Timber on hand at the Depots and the outstandings for Timber actually sold, but of which the money could not be all collected, so as to exhibit it in the accounts of last month.

Estimated value of Timber in Store	Rupees	3,06,563	6 0
Outstandings	„	1,00,105	13 9
Total Rupees...		4,06,669	3 9

4. As both the Account Current with a deficit, and the large stock of timber now on hand, are extraordinary, they serve to explain each other. While on the one hand no sale of consequence was held during last year, timber on the other was collected in the Depots. Such sales as were held come off only lately, and the time, as already explained, was too short to bring all the sums to account. Besides, though payments have actually been made by parties belonging to the Bombay Presidency, they were made by Bills not negotiable, on her Majesty's Bank, from whence Bills of exchange in favor of the Collector of North Canara have to be obtained before the sums can appear in the Collector's accounts.

5. Last year the estimated value of Timber in Store was Rupees 1,54,006, while now, including the outstandings, it is Rupees 4,06,669-3-9, or Rupees 2,52,663-3-9 more, which sum, had it come to account, would have been the net profit, leaving the same quantity of Timber in Store as was shown last year.

6. The past year was an extraordinary one. Throughout the year, the Establishment as well as the working people were more or less laid up with fever, and such is the case still. Several people of the Establishment died. Contractor Pinto lost no less than sixty-two men in Goond, of whom five were Superintendents. Consequently not one business did, or could go on, as it otherwise might have been expected to have done.

7. This having been the case, the Timber sales above the Ghauts were deferred till better times, and all cuttings of new trees were discontinued. Such of the workmen, who were able and willing to do business for the Depot were ordered to collect only outlying dead wood, wherever they would find any. A certain rate was fixed for them from each jungle to the Kesorally Depot, four miles from Hallial. In this manner about 20,000 candies of old wood of every description have been collected. The collection of this wood was more expensive than it would have been, had fresh trees been cut in a comparatively small area. The cost is about Rupees 60,000. At the sales, this wood will not fetch such a price as could be expected of good large timber, however, next year Rupees 1,50,000 will be realized at the very least. This result is satisfactory, being profitable while it saves an immense quantity of new cuttings.

8. *Smallwood* or clearings from the jungle-land given out for permanent cultivation forms now a regular, though a very troublesome business for the Establishment. The Account Current on this head shows Rupees 12,334-1-9, as the income, while the expenditure is only Rupees 2,643-4-7 well worth the trouble, and much better to save the wood than allow the burning of it.

9. *Sandalwood* in North Canara is not first rate, and it will never show a great figure in the accounts. To go on with the work as commenced three years ago, began at one end of Sirey Taluq, cutting dead and defective as well as ripe trees, and at the freeing others from Bamboos or other overhanging stuff, it is calculated that another ten years will be required to finish the Sirey taluq. The average expenditure will be about Rupees 600, while the income on this head will be about 5,000 Rupees, a sufficient remuneration for mostly defective wood only.

10. *The new seignorage* rule, according to which the local wants are supplied, has now had its trial for one year. The measuring and stamping each piece of wood entails not only an Establishment, but a vast deal of work for the same. During the year 1,034 permits were issued, of which 465 only have been returned to the Office. Sickness prevented many people to cut the wood in the given time, and therefore two additional months were granted to every permit holder throughout the District, otherwise the whole number of issued permits would have been returned duly filled up. The accounts can therefore only be shown of the 465 returned, on which were cut,

Wood	12,105	pieces—Candies 5,673-1-4-15.
Bamboos	1,36,090	
Small bamboos .. .	15,728	
Canes	18,011	
	2,69,829	

Considering this to be half of the number of permits issued, the other half may be estimated at the same rate. The annual grant would therefore amount to Timber 24,210 pieces containing Candies 11,346-2-10. and Bamboos 5,39,658. Financially the present system is better. The receipts on this head were Rupees 6,881-13-9, and the expenditure Rupees 750-9-3, or about 8¼ per cent on the income. According to the old rule, trees were granted at 8 Annas each, from which 1 Anna or 12½ per cent. was deducted.

11. *Firewood* is now mostly cut up from branches and other dead smallwood, and this year Rupees 3,103 were realized. It is more expensive to cut up the branches and such wood fetches less in the market, than wood cut up of the Kanagálú tree (*Dillenia Pentagyna*) for which always more is paid on account of its being so easily split.

12. *Kallanuddy.*—It was impossible to do anything this season towards clearing this river. People could not be procured who knew anything of blasting rocks, and such as could have been had, were urgently required by the Engineer Department.

SEDASHEGHUR,
8*th May* 1862.

(Signed) S. MULLER,
Asst. Conservator, North Canara Forests.

(Signed) J. H. GOLDFINCH,
Collector.

REVENUE DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read the following letter from Major H R. MORGAN, late Officiating Conservator of Forests, to J. D. SIM, Esq., Secretary to Government, Revenue Department, Fort Saint George, dated Ootacamund, 5th July 1862:—

SIR,

1. I have the honor to forward my annual Report for 1861-62.

2. I have to explain that there has been some delay in the printing, to account for the Report not reaching Government by the 30th of June.

ORDER THEREON, 19th September 1862, No. 2,040.

1. The Government proceed to review the Report of the late Officiating Conservator of Forests for the official year 1861-62.

2 *Wainád Forests.*—Paragraphs 2–5. These forests consist principally of Teak, but they contain an abundance of fine Blackwood and much Bamboo jungle. They have received much damage from the depredations of Kurambars, and by the practice, called "takkul," of making temporary clearings for the clandestine cultivation of Raggee, but "takkul" seems to be on the decline. Paragraphs 2, 3 and 4 will be brought to the notice of the Collector through the Board of Revenue.

3. In paragraph 5 it is urged that the Assistant in charge of these forests should, for forest purposes, be invested with magisterial powers. This the Government cannot permit. It would be contrary to principle that the Conservator should adjudicate in his own cases.

4. *Hoonsoor Forest.*—Paragraphs 6—14. This forest has lately* been transferred from the Commissariat to the Conservator's Department. A grant of 10,450 Rupees has recently† been sanctioned in the Department Public Works for the completion of the Tambracherry Ghât.

* G. O 10th September 1862, No 1,927.

† G. O 3rd July 1862, No. 1,500, P. W D.

5. In paragraph 9 of the Report, Major Morgan observes, that "the boundaries of the different Government forests have not yet been decided." The boundary line between Wainád and Mysore was finally determined on in the Order of Government No. 1,479 of the 8th July last, but this remark seems to refer to the claims advanced by certain Devastanams and Uralars, upon which the Director of Revenue Settlement has been directed to report. The Survey and Settlement parties have now been withdrawn from Wainád, but the Director will report what progress has been made in the demarcation of forest boundaries, and whether any arrangements can be made by his Department for the final settlement of the above claims. It is desirable that the limits of all the forests in the country should be defined where practicable and the progress of the Revenue Survey will tend to this result.

G. O 166 of 31st January 1860.
„ 814 of 15th April 1862.

6. *Mudumalai Forests.*—Paragraphs 15—18. These forests are held on a lease which expires in March next, by which time it is anticipated that nearly the whole of the Teak fit for felling will have been cut. There is a large stock of timber on hand, lying in the forest. This should be removed without delay, as it is stated that all timber remaining in the forest after the expiration of the lease will be forfeited to the proprietor. The question of renewing the lease is now under the consideration of Government. Financially Mudamalai exhibits a very small profit, but the wood in store has not been brought to account.

7. *Sigur Forest.*—Paragraphs 19—22. The cuttings in this forest have been confined to Sandalwood, the Teak jungles having been exhausted by former contractors and requiring rest. Its receipts exceed its expenses by nearly 20,000 Rupees and Government are assured that this profit will be annually maintained.

8 *South Canara.*—Paragraphs 23—27. These forests would not appear from the Overseer's Report to be in a very flourishing condition, though young trees, worth taking care of, are said to be springing up in abundance. The forests of this District should be visited by the Conservator and separately reported on

26. Paragraph 103 deals with the subject of waste lands, and Major Morgan states his opinion that it would be impolitic to refuse systematically all forest land, and that it should be given on condition that the jungle above 6,700 feet should not be cut, and that for every bandy load of wood sold a seigniorage of 1 Rupee should be paid. The Government have already authorized the reservation of the Devi Shola, and they will be prepared similarly to reserve other forests that may be required for public purposes, or the destruction of which would be likely to affect unfavorably the rain-fall and climate, but where waste land is to be sold they prefer selling it outright with all upon it. The reservation of the timber would lead to endless disputes and its value will always be realized at the sale of the land.

27. A map of the Wainád forests accompanies Captain Hunter's very complete and interesting report, and Major Morgan recommends (paragraph 106) that it should be lithographed. Captain Hunter however states that he has been unable to mark off the forests belonging to Government on account of the uncertainty which exists regarding the boundaries. The Government therefore defer passing any orders regarding the map, pending the submission of the reports called for in paragraph 5 *supra*.

28. Major Morgan expresses himself well satisfied with the exertions of the Assistant Conservators and his other subordinates.

29. *Financial results.*—Paragraph 109. The profits of the year considerably exceed those of the preceding years, as exhibited in the margin, and so far the results of conservancy are satisfactory. North Canara which contains the finest and most profitable forests has now been transferred to the Bombay Presidency, and if the profits of that District be taken at the same amount as in the previous year for the sake of comparison, and because the value of the wood in store appears to have been entered in the receipts, the total profits will be reduced from Rupees 4,28,639 to Rupees 2,03,585. Even after this deduction the profits of 1861-62 show a satisfactory excess over the preceding years.

	Rs
1859-60	1,98,294
1860-61	1,83,731
1861-62	4,28,630

30. The value of the timber on hand is estimated at 2,69,000, but this is exclusive of the wood stored in North Canara for which the Bombay Government have to account * There is in hand 91,000 Rupees worth of Anamalai wood. Had this been sold within the year, as Major Morgan remarks, the operations in those forests would have presented a very different result. In fact instead of a loss of 20,000 Rupees a profit of 70,000 would have been exhibited. Major Morgan says 50,000, but he appears to have deducted the expenses of the year, 42,200 Rupees, which have already been brought to account, and he has omitted to make allowance for the loss now standing in the financial Statement. The profit to be derived from the sale of this timber will appear in the accounts for next year.

† See Statement submitted with the Acting Conservator's letter, recorded in Government Order, 18th June 1862, No. 1,311

* G. O. 9th July 1862, No. 1,500.

(True Extract)

(Signed) P. P. HUTCHINS,

Acting Deputy Secretary to Government.

To the Conservator of Forests.
" Board of Revenue.
" Director of Revenue Settlement
" Military Department.
" Financial Railway Department.
" Department Public Works.

Exd. S T Augustin.

REPORT

OF THE

CONSERVATOR OF FORESTS,

FOR THE

OFFICIAL YEAR

1862-63.

MADRAS:
PRINTED AT THE UNITED SCOTTISH PRESS BY GRAVES, COOKSON AND CO.
1863.

APPENDIX

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B An account of operations in the plantation of Australian trees

C Report upon the Nalla Mallai mountains and their forests

D Description and plate of the Red Sanders of Commerce (*Pterocarpus santalinus*)

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CAMP OOTACAMUND
1st *May* 1863.

From CAPTAIN R. H. BEDDOME,
Officiating Conservator of Forests,
To J. D. SIM, Esq.,
Secretary to Government Revenue Department.

SIR,—

I have the honor to forward my Annual Report for 1862-63 of the forests under my charge.

1. During the month of May I inspected the forests in the Kurnool district, traversing nearly the whole of the forests on the Nalla Mallays, a large range of well wooded hills which had hitherto been under the Revenue authorities. A special report was forwarded to Government on these forests, and subsequently an establishment was organized. In June, I visited the Cuddapah range, including the hill tracts of forests along the line of railway, and the forests on the North Arcot hills, then under the Revenue authorities. At the end of that month, I inspected the Salem district, and during July and August the Australian plantations near Wellington, the Neilgherry Sholas, the Mudumallai forests, and Sigur establishment, and the Wynad forests and establishment, and the Hunsúr forests, which were then under the Commissariat department. In September, I explored the Pennagara Achawood forests in the Salem district, and inspected the Sandalwood forests, and depôts on the Denkincottah range of hills. In October, I inspected the Nellumbur Teak plantations, and the forests on our leased lands near Nellumbur. In November, I visited the Anamallay forests, and in December, the establishment of the Madura district and the Pulny mountains, and the forests on the hills round the Cumbum valley. In January, I again inspected Wynad, and proceeded through the Coorg forests *en route* for the South Canara district; in February, however, I was attacked severely with jungle fever, and was obliged to give up my visit to that district, with the exception of South Canara; and Goomsur, which has been only lately handed over to the Forest department, all the establishments and forests have been visited during the official year. Special reports upon each forest have been forwarded to Government.

2. CUDDAPAH AND NORTH ARCOT.—At the commencement of the official year, the establishment in the Cuddapah district was in a very disorganized state, owing to the misconduct of the late Superintendent Mr. Morison. It was, pending investigation, placed for upwards of two months, under the supervision of the Revenue authorities—(Vide G. O. No. 1105, dated 19th May 1862)—and the Collector did not credit the Forest department with the amount of seignorage collected, although that department bore the expense of the establishment. The establishment was then reorganized, and put upon a more economical footing than before, and a new code of rules brought into force, which prevented the possibility of any peculation on the part of the Forest establishment; printed licenses and vouchers were also introduced, which have greatly tended to stop smuggling. Much clandestine felling was being carried on when Mr. Spring was appointed Sub-Assistant Conservator of this district; he has, however, been very energetic in his efforts to check it, and his sales of confiscated timber amount to Rupees 1,600. It is hoped, that the practice is now quite put a stop to.

3. *Its Forests.*—The chief forests in the Cuddapah district are situated in the Rajampett, Sidhout, and Budvail taluqs.

Rajampett.—The forests in this taluq are those at Balapilly, Shettiguntu, Yerraguntlacottah, Gathala, Nuckanapally, Othalur and Thepinhpally.

Sidhout.—The Palcondah, Mulliemcondah, the Lunka Mallays, and a portion of the Nalla Mallays.

Budvail.—The Yelligunda on the east, and the Nally Mallays on the west.

4. *License and voucher system pursued.*—The forests of this district are not worked by the Forest department, but are open to the public, who take out licenses and vouchers for felling, paying a fixed seignorage upon the different kinds of timber according to their value.

5. *Depôt formed.*—As a check against imposition on the part of the wood merchants, and to secure public departments against any inconvenience—(Vide Proceedings of the Board of Revenue, No. 4694, dated 19th July 1862)—a small depôt has been opened by the Forest department at Balapally: the Ordnance department has been already supplied with timber from this depôt.

6. North Arcot Forests.—The North Arcot hill forests, north west of Kircumbaddy, which join the hill tracts of the Cuddapah district were handed over to the Forest department in July—(Vide G. O. No. 1537, dated 16th July 1862.) They were placed under the Sub Assistant, in charge of the Cuddapah range, with a small establishment amounting to Rupees 41 per mensem; the revenue has been gradually increasing, yielding at an average of 200 Rupees per mensem

The great advantage of this arrangement was, that it enabled us to make the Kircumbaddy pass our Tannah Station for collecting licenses, and as all timber intended for the Madras market, cut either in the North Arcot or Cuddapah hill forests must pass through this outlet, it is almost impossible for any one to pass timber unless they possess a license.

7. *Reserved timbers and seignorage payable thereon.*—The following is a list of the reserved timbers in the Cuddapah and North Arcot forests, and the rates of seignorage thereon.

Botanical names.	*Teloogoo names.*	
Tectona grandis...	Tek	Taxed at 6 Rupees per bandy load.
Diospyros melanoxylon	Tunki	
Dalbergia latifolia	Jitegi	
Pterocarpus santalinus	Chandam	
Pterocarpus marsupium	Yeggi	
Terminalia tomentosa...	Erumaddi or Nalla maddi	At 5 Rupees per bandy load.
Hardwickia binata	Nar yepa...	
Bassia latifolia	Ippi...	At 4 Rupees per bandy load.
Chloroxylon swietenia or Satinwood	Biloo	
Vatica laccifera	Jallari	
Do. tambagana...	Thamba...	
Conocarpus latifolius	Chiriman or Yella maddi	At 3 Rupees per bandy load.
Soymida febrifuga...	Sumi...	

8. The seignorage is higher in this district, than in others in which we have an establishment, but the jungles are of easy access, and close to the line of Railway.

Red Saunders. (*Pterocarpus santalinus, L.*)—This tree yields the chief Revenue in this district; it is eagerly brought up for building purposes at Madras, and is preferred as building posts by the natives to any other timber; the inferior logs, and the branches, and roots find a ready market as a dye-wood. A small experimental plantation of this tree is now being formed in the Balapally jungles. As this tree is but little known, and the descriptions in all botanical works are erroneous, a description and plate of it are appended to this report.—(Appendix D.)

9. *Sal timbers.*—The two species of Sal, viz: Jallari and Thamba, are much felled for the Madras market; fine beams are obtained from the Thamba.

10. *Wild Mango timber.*—The Wild Mango grows very large in some of the ravines, and is much cut for planking, packing cases, &c.

11. *Financial results.*—The results for the year are as follows:—

Cuddapah.

Expenditure:

	Rs.	A.	P.
Cost of establishment and working charges, ...	3,461	6	5

		Rs.	A.	P.
Receipts:				
	May... ...1862.	607	0	0
	June & July } ... „	The establishment was under the supervision of the Collector, and no receipts were carried to the credit of the Forest department.		
	August ...1862	380	15	0
	September... „	1,783	8	0
	October ... „	1,433	4	0
	November... „	757	9	8
	December ... „	1,142	8	0
	January ...1863.	855	8	0
	February ... „	371	0	0
	March ... „	1,684	5	0
	April ... „	934	5	8
	Seignorage paid upon sleepers... ...	348	3	0
		10,721	2	4
Timber cut (unsold):				
	Value of timber in store...	400	0	0
		11,121	2	4

Deducting the expenditure, this gives a return of 7,659-11-11 for the year.

North Arcot.

Expenditure:				
	Cost of establishment	332	0	0
Receipts:				
	May till August under the Revenue authorities.			
	September	96	14	0
	October	158	7	3
	November	203	11	0
	December	224	8	0
	January 1863	212	3	0
	February „	205	15	0
	March „	234	12	0
	April „	32	0	0
		1,373	0	9

This shows a balance of 1,041-6-9 in favor of the forest; the sum of 173-1-3 however is credited in 1863-64.

12 KURNOOL.—The Nallay Mallays, a range of hills about 70 miles in length and 15 to 25 miles in breadth, which run from the Cuddapah district to the southern bank of the Kistna, are covered with very fine forests. These were explored by the Officiating Conservator at the commencement of the official year, and a full report was forwarded to Government.—(Appendix C.)

13. *The Head Overseer in the department appointed Sub-Assistant Conservator and placed in charge.*—In September, Mr. Lennon, the Senior Overseer in the department was nominated Sub-Assistant Conservator, and appointed to the charge of this range with an establishment of 1 daffadar at 15 Rupees and 10 peons at 6 Rupees each.

14. *The license and voucher system.*—The Forest department do not work the forests in this district, but they are open to the public on the license and voucher system. It has proved a great check upon smuggling, and the monthly receipt for seignorage has been steadily rising; when the canals are open

to the coast, and the railroad progresses, timber will become very valuable in the district. Great destruction of the young teak was carried on before the Forest department took charge, and there was little or no teak of any size left on these mountains; hundreds of young teak saplings of only a few inches in diameter were annually cut for building purposes This was at once put a stop to, and also the felling of other trees of immature growth, and it is hoped that the teak will now grow up under conservancy, as it is very evident from the stumps that there has formerly been teak of very fair size. Although the felling of teak has been put a stop to, the monthly receipts are more than double what they were before the department was organized—this is a proof that clandestine felling must have received a great check, as the demand for timber in the district cannot have suddenly increased at this enormous ratio.

15. *The Nalla Maddi Tree.*—The finest forest tree in this district is the Nalla Maddi (*Terminalia tomentosa*), and it grows very large in some parts of the Nalla Mallays.

16. *Reserved timbers and seignorage payable thereon.*—The following is a list of the reserved timbers in this district, and the rates at which they are taxed; the felling of teak has been stopped for the present.

Botanical names.	*Teloogoo names.*	
Pterocarpus marsupium...	Yeggi	2 Rupees the bandy load.
Terminalia tomentosa	Nalla Maddi.	
Terminalia arjuna	Erumaddi	
Dalbergia latifolia	Jitegi	
Hardwickia binata	Nar Yepa	
Satinwood	Billoo	
Conocarpus latifolius	Chiriman	
Gmelina arborea	Gumar tek...	
Diospyros melanoxylon...	Tunki...	

17. *Red Saunders.* (*Pterocarpus santalinus, L.*)—Grows on the southernmost parts of the district, but as there is little at present save saplings, its felling has been stopped till further orders.

18. *Financial results.*—The following are the results for the eight months that the district has been under conservancy.

Expenditure :

		Rs.	A.	P
Pay of establishment...		1,749	7	10
Proceeds :				
Seignorage for September 1862		17	0	0
do. October... ... „		124	8	0
do. November... „		820	6	0
do. December... „		1,622	10	0
do. January... ...1863		2,939	8	0
do. February... „		2,999	12	0
do. March..... „		3,951	6	0
do April..... „		4,611	2	0
		17,086	4	0
Sale of confiscated timber...		201	7	6
		17,287	11	6
Timber in depôt not sold.				
Confiscated timber, 25 bandy loads		300	0	0
		17,587	11	6

Deducting expenditure, this shows a balance of 15,838-3-8 in favor of the Forest.

19. SALEM AND SOUTH ARCOT.—Lieutenant Ouchterlony, Assistant Conservator of this district, was ordered to join his Regiment, as he had volunteered for one of the New Queen's Regiments, and Lieutenant Borradaile of the Staff Corps took charge of the district in September.

20. *South Arcot hill forests placed under conservancy.*—The tract of hill forests lying in the South Arcot district near Cotapatty to the north and Ahtoor to the south is a continuation of the Salem forests, although in another district. On the Officiating Conservator's recommendation, these forests also were placed under the superintendence of the Salem conservancy department, in August last —(Vide G. O. No. 1696, dated 9th August 1862.

21. *Sandalwood.*—The most valuable tree in this district is the Sandalwood (*Santalum Album.*) It grows abundantly all over the Denkincottah range of hills north west of Salem, and the Forest department are themselves working these forests. Sandalwood is also found on the Javadie hills north east of Salem; the trees at present are too young to be felled, but they are strictly conserved.

22. *Teak and Satinwood.*—Teak and Satinwood had been very much felled in this district before conservancy was introduced, and very few trees of any size are at present to be met with, and these generally in inaccessible places.

23. *Forests much injured by the great demand for Railway sleepers in former years.*—The forests in this district have suffered considerably from indiscriminate felling for Railway sleepers.

24. *Forests open to the public with the exception of Sandalwood.*—With the exception of Sandalwood, these forests are open to the public on the license system.

25. *Reserved timbers and seignorage.*—The following are the reserved timbers in this district and the tax paid thereon

Botanical names.	*Tamil names.*	
Tectona grandis	Tek	At 3 Rupees the bandy load.
Satinwood	Barush	
Cedrela-toona	Malee	
Chickrassia tabularis (or Chittagong wood.)	Suli or aglay	
Diospyros melanoxylon (or Ebony)	Tambi	
Dalbergia latifolia (or Blackwood)	Erupata or eramaddi	
Pterocarpus marsupium	Vengay	
Hardwickia binata	Acha	At 2 Rupees the bandy load.
Conocarpus latifolius	Volle naga	
Terminalia tomentosa	Kara marda	
do. Arjuna	Marda	
do. Chebula	Kadukai	
Bassia latifolia	Illupi	

26. *Revised Rules.*—A revised code of rules, and the voucher and license system were introduced into this district after the Officiating Conservator's inspection. The Assistant Conservator reports that the seignorage has been steadily increasing since they came into force, and that now the seignorage averages 1,000 to 1,200 Rupees per mensem.

27. *Financial results.*—The establishment in this district has cost as follows :—

		RS.	A.	P.
Expenditure :	Establishment	9,642	10	6
	Working charges	3,436	4	9
		13,078	15	3
Proceeds :	Sale of licenses and tickets	13,975	14	8
	Sandalwood sold	8,572	14	8
		22,548	13	4

	Rs.	A.	P.
Amount of timber cut but not sold:			
Sandalwood cut but not brought into depôt...	10,000	0	0
	38,548	13	4
Deduct expenses...	13,078	15	3
	25,469	14	1

Of the sum 8,572-14-8 (Sandalwood sold) 5,912 was cut last year; if this sum therefore be deducted, the profits for the year will be Rupees 19,557-14-1 after paying all expenses.

28. Pennagara Achawood Forests.—These forests are situated on the hilly tracts near Pennagara about 50 miles north west of Salem; they contain a large quantity of Achawood (*Hardwickia binata*) and other valuable timbers, chiefly Terminalias. The Collector of the district has been asked by Government to report whether the opening of a direct road from Pennagara to Auchitty would be otherwise of advantage to the district; if this road could be made, or if the old Pennagara road could be made passable for carts, it would certainly pay to work these forests.

29. Mudumallay.—During the official year 63,500 cubic feet of wood have been sold to merchants in the forest, and 4,400 cubic feet to the Barracks at Wellington, and 960 cubic feet to the public; 32,312 cubic feet have been felled, and there is at present about 120,000 cubic feet in depôt.

30. *Renewal of the Lease.*—The lease of this forest expired at the end of the official year, but a new lease has been entered into—(Vide G. O. No. 394, dated 24th February 1863) for a period of 99 years at Rupees 3,500 per annum with the right to fell all timbers; nearly all the teak of any size has been felled, but it was very important to obtain a renewal of the lease for the following reasons:—

I. Though most of the ripe teak has been felled, there is an immense quantity of fine young trees coming on, which in future years will be required for the supply of the Neilgherries.

II. If a renewal of the lease had not been obtained by the Forest department, the forests would have been rented out for Coffee and other cultivation, the young teak all destroyed, and the right of way through the forests, and the use of the roads and buildings, which have cost a considerable sum, would have been lost to the Forest department. As the department is now working the south-east corner of the Wynad forests which join the Mudumallay forests, this would have caused considerable inconvenience.

III. The sale of the jungle timbers is expected nearly to cover the amount paid for the lease.

31. *Financial results.*—The results for the year are as follows:—

	Rs.	A.	P.
Expenditure:			
Establishment	13,835	9	10
Working charges	30,188	1	7
	44,023	11	5
Receipts:			
Timber sold	62,731	5	0
Amount of timber in depôt:			
120,000 cubic feet of teak in depôt valued at	1,21,071	15	0
	1,83,803	4	0
Deduct Expenditure.....	44,023	11	5
Profit.....	1,39,779	8	7

32. Seegur.—These Sandalwood forests have been systematically worked; 6,949¼ maunds of Sandalwood have been sold during the year, and about 600 maunds of Sandalwood are now in depôt.

33. *Plantation formed.*—A small Sandalwood plantation has been commenced.

34. *Financial results.*—The results for the year are as follows —

		Rs.	A	P.
Expenditure :				
Pay of establishment,...	...	5,507	10	2
Working charges...	...	8,062	6	4
		13,570	0	6
Proceeds				
Sale of Sandalwood...	...	27,641	4	3
Amount of timber in depôt (unsold)				
600 maunds of Sandalwood		4,337	10	0
Teak, Vengay, and other woods cut in 1862-3, valued at		11,902	6	5
		43,881	4	8
Deduct expenditure... ...		13,570	0	6
Profit		30,311	4	2

35. Bhowani and Collegal Sandalwood forests handed over to the department.—From the commencement of the next official year, the talooks of Bhowani and Collegal, in both of which there is a considerable amount of Sandalwood, are to be handed over to the Assistant Conservator of the Seegur range.

36. Anamallay.—Captain Brine, the late Assistant Conservator of these forests suffered much from fever, and eventually resigned his appointment; he was relieved by Captain Michael on the 1st of November or at the close of the working season.

Felling was energetically carried on during the working season—2,629 teak planks and heads were cut, and 158 logs were cut and squared for the Trincomallee coal sheds, and 50 logs of Vengay were cut. The carting and floating arrangements were not carried on as they should have been, but the ill health of the late Superintendent partly accounts for this ; most of the timber has therefore been stored in the forest, or at the depôts at the head and foot of the timber slip.

37 *No timber sold owing to the breaking up of the Indian Navy.*—The Bombay dockyard has annually taken all the teak planks cut in this forest. Owing to the breaking up of the Indian Navy, they declined taking any timber this year ; tenders were advertised for by Captain Michael for the purchase of upwards of 500 planks which he has floated to Ponany after he relieved Captain Brine. The offers however were not advantageous, 40 Rupees only being offered for the 100 kolas=26½ cubic feet ; this was 5 Rupees per 100 kolas less than the last market quotation for 4th class planks. It was thought better to show no sales during the year than to close with a disadvantageous offer.

Teak to the value of Rupees 1,150-2-7 has been sold to the public. This is the only sale in this forest during the year, and this amount not having been paid into the Treasury before the end of the year does not appear in the accounts for 1862-63.

38. *Anamallay forests offered to the English Navy.*—It has been proposed that this forest should supply teak for the English Navy, and the subject has been referred to the English Admiralty. There is no doubt, but that Burmah teak can be purchased much cheaper, but it is far inferior. Malabar teak has been lately quoted in the Bombay market at 1 Rupee more per cubic foot than Burmah teak. It certainly seems a pity that the Anamallay teak, which is undoubtedly the finest in the world, should not be secured for the Royal Navy.

39. *Severe illness of the Superintendent.*—Captain Michael, the Assistant Conservator has been very dangerously ill during the last month of the official year, and the Officiating Conservator has been obliged to take charge of his duties—this accounts for there being no regular Annual Report from this forest.

40. Bolamputty Forests.—The forests of the Bolamputty valley and the slopes of the Coimbatore hills have just been handed over to the Forest department—(Vide G. O. No. 321, dated 10th September 1862), and placed under the charge of the Assistant Conservator of the Anamallays ; they

contain a considerable quantity of Vengay (*Pterocarpus marsupium*), Kara Marda (*Terminalia tomentosa*) and Vellay Naga (*Conocarpus latifolius*) also some red cedar (*Soymida febrifuga*), white cedar (*Cedrela Toona*) and Blackwood. They are open to the public on the license and voucher system.

41. CHENAT NAIR FOREST.—The Railway Company has just taken a further lease for three years of this forest, which is situated close to the line between Coimbatore and Palghat; the terms of the lease were raised on account of the enhanced price of timber in the market. By the terms of the former lease, a seignorage of Rs. 1-8-0 per tree was paid; this is now raised to Rs. 3 for every Irul (*Inga xylocarpa*), Vengay (*Pterocarpus marsupium*), Kará Marda (*Terminalia tomentosa*), and Ven Teak (*Lagerstræmia microcarpa*) and Rs. 2 for other jungle timbers. All Teak and Blackwood trees are carefully conserved, as very few trees of either are at present of a size fit to be felled. The forest is systematically worked by an Overseer under the Railway Engineer of the district, and is under the supervision of the Assistant Conservator of the Anamallays. The seignorage due for trees felled during the last year amounts to 732 Rupees.

42. WYNAD AND HUNSUR.—*Wynad.* Until the 1st of April, Captain Gib in charge of this range had also to supervise the whole of the Mysore forests—this took two-thirds of his time.

43. *Its timbers*—The Wynad forests are very valuable, containing an immense supply of Teak. Honé (*Pterocarpus marsupium*), Matti (*Terminalia tomentosa*), Blackwood (*Dalbergia latifolia*) and other valuable timbers. Now that the Assistant Conservator has been relieved from the duties of travelling over the Mysore forests, a considerable revenue may be anticipated from Wynad.

44. *Financial results.*—The following are the results of the year.

	Rs.	A.	P.
Expenditure:			
Pay of establishment...	7,728	4	6
Working charges...	4,183	15	3
Total expenditure	11,912	3	9
Proceeds:			
13,089 cubic feet of Teak, formerly girdled for Kumri, sold standing	4,444	14	5
24¼ cubic feet of Honé and Matti	6	3	0
444¼ cubic feet of green Teak felled by the department and sold at 1-2-0 per cubic foot.	500	0	0
Amount of confiscations	400	0	0
Amount realized.....	5,351	1	5
Amount of timber cut (unsold):			
27,480¼ cubic feet of green Teak felled by the department, and now stored partly in the forests and partly in the depôt, and 5,911 cubic feet of confiscated timber in depôt valued at the lowest estimation. ...	18,678	5	3
	24,029	6	8

This gives a balance of Rupees 12,117-2-11 in favor of the forest.

45. *The sale of timber stopped.*—Shortly before the close of the year, Government waived all claim to upwards of 6,000 logs of Teak which had been cut by merchants in disputed forests, and which were detained by order of Government three years ago. This large stock of timber was consequently thrown into the market, and the sale of timber cut by the Forest department was quite put a stop to. If this had not occurred, all the timber cut during the year would have been sold. In consequence of this large surplus of Teak in the market, the timber on hand has been entered at a very low valuation.

46. *Kumri quite checked.*—The forests in this district have been carefully conserved, and only three or four slight cases of Kumri have taken place, and those not of Teak.

47. *A lease of the Pulpally Forests very desirable.*—Government in their Order No. 2,551 A, of the 5th of December 1862, ruled that the Trustees of the Tirunelly and Trichillery temples had failed to establish their claims to any of the teak forest tracts; they however acknowledged the claims of the Pulpally temple authorities; this latter temple however claims several distinct tracts, and the boundaries are not clearly defined. If the Trustees can be persuaded to rent the forests to Government on reasonable terms, it is the intention of the Officiating Conservator to propose to Government that the Forest department should lease them, as it would enable the department much more effectually to check all smuggling.

48. HUNSUR.—This forest was formerly worked by the Commissariat department; there was no adequate establishment, and the wastage was considerable. It was handed over to the Forest department in G. O. No. 1,927, dated 10th September 1862, and Captain Gib, Assistant Conservator, Wynad range, took charge on the 25th November 1862.

49. *Its timbers.*—These forests comprise three tracts, the Baigoor and the Bunkamaddy forest, south of the Cuppony river, and the Bassalmaddy forest on the north or left bank of the same river. They contain a considerable supply of ripe teak, Honé, and Mattee, and also much Blackwood; an immense quantity of fine young teak trees of 3 to 5 feet in circumference now coming on will yield a large supply of teak in future years.

50. *Financial results.*—The results for the five months are as follows:—

		Rs.	A.	P.
Expenditure:				
	Establishment.....	481	3	0
	Working charges...	1,616	13	9
	Total expenditure.....	2,098	0	9
Proceeds:				
	Sale of timber...	98	1	0
Amount of timber cut (unsold):				
	11,024¼ cubic feet of teak felled, squared and removed to depôt or stored in the forest at a very low valuation.....	6,454	2	9
		6,552	3	9

This gives a balance of Rupees 4,454-3-0 in favor of the forest.

51. SOUTH CANARA.—The establishment in this district has been on too small a scale to enable the department to show as satisfactory a result as they might. There are 21 rivers running from the forests to the coast, and it has not been possible to put a thorough check upon smuggling. An increased establishment, as follows, has been proposed for the ensuing year, and has been entered in the Budget.

Present Establishment.

	Rs.	A.	P.
1 Overseer.	110	0	0
3 Daffadars at 10½	31	8	0
11 Peons at 6	66	0	0
	207	8	0

Proposed Establishment.

		Rs.	A.	P.
1	Sub Assistant Conservator...	150	0	0
	Travelling allowance. ...	30	0	0
2	Assistant Overseers at 60...	120	0	0
1	Writer.....	25	0	0
4	Goomastahs at 10	40	0	0
3	Daffadars at 10½	31	8	0
18	Peons at 6	108	0	0
		504	8	0

If this increase is sanctioned, this district will, I am sure, give a much larger revenue. It has been found impossible to get the Poon Spars and some of the larger timber out of the forests without

elephants, but the services of two of the Commissariat elephants from Cannanore have just been sanctioned by the Quarter Master General upon condition that they are fed by the forest department and returned immediately when required.

52. *Pruning and planting.*—The Forest Overseer has given much attention to pruning and planting 2,621 teak plants and 3,379 blackwood plants have been planted out; 20,000 blackwood plants have been reared in the nurseries, and 43,988 pits for Blackwood and Teak have been dug.

53. *Timber felled by the department.*—460 teak and blackwood trees, containing 658 Bombay candies and 75 candies of Heebalsoo wood, have been felled by the department; this wood has been stored in the forest, as carriage was not available.

54. *Financial Results.*—The results for the year are as follows:—

	Rs.	A.	P.
Expenditure:			
Pay of establishment	2,179	12	1
Working charges	2,763	14	1
	4,943	10	2
Proceeds:			
Seignorage paid on timber, firewood, &c.	6,559	8	1

Amount of timber in depôt (cut during the year but not sold):

	Rs.	A.	P.
460 logs of teak and blackwood = 658 candies at 7-0 Rupees per candy	4,606	0	0
35 logs of Heebalsoo = 75 candies at 8 Rupees per candy	600	0	0
12 logs of junglewood = 12 candies at 1-8-10⅔ per candy	18	10	8
	5,224	10	8
Add receipts	6,559	8	1
	11,784	2	9
Deduct expenditure	4,943	10	2
Results for the year	6,840	8	7

55. Madura.—The chief Government forests in this district are those on the Pulny hills, and on the hills lying to the south and south-east corner of the Cumbum valley; much fine forest round the latter valley belongs to Zemindars who fell largely for the market. Much timber also is brought to Madura from Tinnevelly hills. The demand on the Government forests in this district therefore is not great; it was supposed that the Great Southern Railway would have indented largely on our department for timber, the introduction however of iron pot sleepers in lieu of wooden ones has, of course, made a great alteration in the case.

56. *Forests chiefly open to the public.*—The forests are chiefly open to the public on the license and voucher system, but the department is working some of the forests at the south of the Cumbum valley.

57. *Boundaries not clearly defined.*—The limits of several tracts of forests on the slopes of the Pulnies belonging to Zemindars are not clearly defined; if these boundaries could be marked out, conservancy would be made much easier in this district. The Collector has been addressed on the subject.

58. *Reserved timbers and seignorage.*—The following is a list of the reserved timbers in this district, and the seignorage charged thereon.

Botanical names.	*Tamil names.*	
Tectona grandis	Tek.	At 6 Rupees the bandy load.
Dalbergia latifolia (blackwood)	Iti	
Artocarpus hirsutas	Anjulli.	

Botanical names.	*Tamil names.*	
Pterocarpus marsupium	Vengay	5 Rupees the bandy load.
Diospyros, sp: (Ebony)	Kuringalli	
Conocarpus latifolius	Vekáli	
Acacia fornesiana	Kasturi	
Vateria Indica	Kungiliam	
Mangifera Indica	Mah Maram	3 Rupees the bandy load.
Chickrassia tabularis	Mala Vemba	
Acacia speciosa	Vaghe	
Schleichera trijuga	Puluchi	
Terminalia chebula	Kadukai	
Terminalia arjuna	Vellay Maradu	
Cedrela toona	Sandaná Vembu	
Nauclea cordifolia	Manje Kadambe	
Do. parviflora	Neer Kadambe	
Acacia odoratissima	Vel Vaghe	
Terminalia tomentosa	Kara Maradu	

59. *Financial Results.*—The following are the results for the year.

	Rs	A.	P.
Expenditure:			
Cost of establishment	2,356	0	8
Working charges	2,587	10	2
	4,943	10	10
Proceeds			
Amount received for seignorage	4,919	12	5
Sale of confiscated timber	30	0	0
Amount received	4,949	12	5
Amount of timber cut during the year but not sold:			
4,671 cubic feet of different timbers valued at	4,421	0	0
	9,370	12	5
Deduct expenditure	4,943	10	10
Results for the year	4,427	1	7

60. *Timber supplied to the Lying-in-Hospital.*—A large quantity of Vengay and Teak was supplied at cost price to the Lying-in-Hospital at Madura.

61. *Conservancy attended to.*—The revenue derived from this district is small, but the department has done much good in checking the wholesale destruction of forests by Kumri and in stopping the felling of saplings and in preventing smuggling.

62. *To show a good revenue, the whole timber trade should be in the hands of the Department.*—If Government was prepared to lease the forests belonging to the different Zemindars in this district (which are all worked on a very wasteful system) and if the Tinnevelly hill forests, south of the Cumbum valley, were also put under conservancy, and the department had one large establishment for the whole, the entire timber trade would be in the hands of the department, all smuggling would be checked, and conservancy would be easy, and the revenue considerable.

63. Nellumbur.—The teak plantations commenced by Mr. Conolly 19 years ago, are in a very thriving state, the growth of the teak is superb, and in future years they will be able to supply the Madras and Bombay markets annually to a large extent, and as the plantations are all on the banks of the Beypore river, the cost of carriage will be very little; these plantations were beginning to suffer considerably from over crowding, and it was very necessary that they should be put under the charge of an experienced forester. The Native Conservator, Chatu Menon, having received a pension, Mr. Ferguson, an experienced forester, was appointed Sub-Assistant Conservator of the district, with charge

of the plantations. Systematic thinning and pruning have been put in force, and a supply of pruning and other tools has been applied for from the Home Government. Henceforth, it is anticipated that all the expenses of the plantations will be far more than covered by the sale of the thinnings.

64. *Forest timbers.*—There are very fine Irul (*Inga xylocarpa*) forests upon the Government leased lands, and a good supply of Ventek (*Lagerstræmia microcarpa*), Vellay Nàgà (*Conocarpus latifolius*), Kara Mardà, Pilla Mardà, and Puh Mardà (*Terminalias.*) The Sub Assistant Conservator has commenced to work these forests, and a fair revenue may be expected from them.

65. *Depôt proposed at Calicut*—The department has hitherto been obliged to sell all the saplings and other timber as they lay in the jungles; they have consequently always been sold at a considerable sacrifice. To obviate this, the Officiating Conservator has proposed* that the department should open a small depôt on the coast at Calicut; as the Collector approves of this plan, and has been able to obtain a favorable site for a timber yard at a very low rent, it is hoped that the scheme will immediately receive the sanction of Government.

66. FINANCIAL RESULTS.—The following are the results for the year:—

	Rs	A.	P.
Expenditure			
Pay of establishment	2,750	13	6
Working charges	3,989	3	3
	6,710	0	0
Proceeds			
Sale of teak saplings	12,043	0	0
Sale of other timbers, by auction	4,620	0	0
Seignorage paid for timber and bamboos ...	1,058	10	8
	17,721	10	8
Deduct expenditure	6,740	0	9
Profit	10,981	9	11
Estimated value of timber on hand:			
60,000 teak saplings felled (but not sold) ...	30,000	0	0
Teak and blackwood, 180 trees felled (but not sold)	2,500	0	0
Other timbers felled (but not sold) ...	500	0	0
	33,000	0	0

67. *Planting.*—45,900 teak trees have been planted out during the year.

68. *Directions for Teak planting.*—Appendix D is a set of rules and directions for teak planting as carried on in these plantations.

69. *Statistics of the plantation.*—Appendix E is a statement showing the number of trees and the probable number of acres planted since the commencement of the plantation, and the estimated value of the trees.

70. NEILGHERRY SHOLAS.—Major Babington was in charge of this range for the two first months of the year, and the whole of his Military pay was debited against the department in addition to his Civil allowances, the sum of Rs. 4,251-3-0 Military back pay for 1861-62 has also been debited against the Neilgherry Sholas, the cost therefore of the establishment has far exceeded the receipts. At the end of June the range was placed under Major Morgan, the Assistant Conservator of Mudumallay and Seegur. By this arrangement a great saving was effected; subsequently the services of 5 of the 7 peons were discontinued, as they were not found to be of much use, and were accused of conniving at smuggling instead of bringing it to the knowledge of the Assistant Conservator

71. *Rapid growth of Australian trees for firewood*—The Australian trees planted out in the Madanah Shola by Major Babington, late Conservator of Sholas, have grown very rapidly. They were planted out in 1861-62, and now average 16 feet in height. Mr. Sheffield, the Forest Overseer in charge of the Sholas, calculates that in 8 years each tree will contain 1½ bandy loads of timber; if they contain half that amount, it will be an immense gain upon the slow growth of the indigenous trees.

* This proposal has since received the sanction of Government—Vide G. O. No. 871, dated 19th May 1863.

72. *Nurseries and firewood plantations.*—The department now has a very fine nursery in the Governor's Shola—it was formed in May last, and there are now between 3 and 4 lacs of Australian trees in it. This Shola is about 200 acres in extent, and is about 6 miles to the west of Ootacamund; it has supplied Ootacamund with firewood for the last two years, and is now almost entirely felled; it has a north-west aspect, the soil is very fine, and it is admirably adapted for planting with Australian trees. Many thousand Australian trees were put down in this Shola last year, but the Todas' buffaloes have committed very great havoc amongst them. The Todas have a mund at this Shola, and they have several times allowed their buffaloes to roam all over the Shola, and thousands of plants have been destroyed. The department has several times prosecuted them, but the Tahsildar has always dismissed the case on the plea that the Todas have a right to portions of the Shola. It is very doubtful if the Todas have any right or title to any of the forest land on the Neilgherries; and where Sholas have not been felled, they generally take good care not to allow their buffaloes to roam at large over them, for fear of tigers. Unless the Todas' limits are clearly defined and boundary marks set up, it will be useless to attempt any more planting in this Shola; this will be a great pity, as it is by far the best site on the hills for a large firewood plantation.

73. *The Davie Shola, the future supply of firewood.*—During the ensuing year firewood for the station of Ootacamund is to be entirely felled in the Davie Shola; this Shola is about 11 miles from Ootacamund, but a good road has been made to it by Government. The Shola is of immense extent, and the supply of wood may be said to be endless.

74. *Firewood to be supplied at a reasonable price to the public.*—The firewood contractor has given a guarantee to sell a bandy load of firewood equal to 750 lbs. weight for Rupees 3-8-0 in Ootacamund; he has also agreed to build depôts between the station and the Shola. Complaints have been made against the conservancy of the timber on these hills; if it was abandoned all the small Sholas in the neighbourhood of Ootacamund would rapidly disappear, and in the course of 3 or 4 years, when the beauty of the station was much destroyed by the disappearance of all the small woods in its vicinity, the public would be compelled to resort to the Davie Shola for firewood.

75. *Financial results.*—The following are the results for the year:—

	Rs.	A.	P.
Expenditure			
Cost of establishment	8,514	2	11*
Working charges	899	9	9
	9,413	12	8
Proceeds			
Sale of timber (on contract, &c.)	3,995	6	3

76. *Australian plantations.*—These plantations were formed by the Public Works Department to ensure a supply of firewood for the Barracks. Appendix B is an epitome of what has been done in these plantations from the commencement. Owing to the ground having been planted indiscriminately, without attention to soil and situation, they have cost far more than they ought to have done.

It would not be a good policy to give up these plantations now, as in that case firewood for the Barracks would in future years have to be brought from a great distance at considerable cost for carriage. Eight Acres have been planted during the year, and 20,000 young trees have been put down, good soil and suitable sites have been planted, and attention will be given in future to these points. From the scarcity of firewood, and the distance from which it even now has to be brought, it cannot be doubted that these plantations will in future years fully pay all outlay.

The following is an abstract of operations during the past year:—

	Rs	A.	P.
Expenditure			
Cost of establishment	1,140	0	0
Working charges	498	10	11
	1,638	10	11

* Of this sum Rs. 4,251-3-0 is Major Babington's back Military pay for 1861-62, debited against the department in this year

		Rs.	A.	P.
Receipts:				
Sale of poles, &c...		82	10	8
Excess of expenditure over receipts ...		1,556	0	3

77. Goomsur.—The forests of Goomsur and Surada have just been handed over to the Forest department—(Vide G. O. No. 2430 of the 18th November 1862.) The forests contain valuable Sál timber—an Overseer and 2 Peons have been appointed, but the Establishment is too small, and probably 8 Peons will be required. The Overseer is now inspecting the forests and drawing up a report upon their capabilities. The Officiating Conservator intends to visit the district soon.

There is very little demand in the district for timber, but a large trade might be opened in Sál timber with Madras. The following are the results for the year:—

Expenditure:				
Establishment and working charges... ...	743	3	10	
Proceeds:				
Seignorage paid on timber, firewood, &c. ...	1,197	1	1	
Deduct Expenditure	743	3	10	
Balance in favor of the Forests	453	13	3	

78. *Chinchona plantations.*—These plantations are now entirely under the charge of the Superintendent of the Government Botanical Gardens at Ootacamund. The Conservator however has been ordered to inspect them periodically. Mr. McIvor, the Superintendent, is a most skilful propagator, and the experiment is a very great success. The plants in the plantations at Ootacamund are not of anything like such fine growth as those in the plantations at Neddivattam, and of the two plantations at the latter place, in which about 11,000 plants are planted out, the plants at the lower one (elevation 4,600 to 5,000 feet) are certainly the finest, and exhibit a more rapid growth: some of these have grown on an average 6 inches every month since they were put down. The propagating houses are at Ootacamund, and the plants have all to be sent out by coolies a distance of 18 miles. If it is intended to plant in many different localities, this probably is the best plan; but if the plantations are to be confined to Neddivattam and Pycarah, and that portion of the hills, it would have been an immense saving to have had the propagating houses and establishment at Neddivattam itself. Although there can be very little doubt that the best elevation for rapid growth is about 5,000 feet, it is still of course a matter of doubt what elevations will yield the greatest quantity of Alkali.

79. *Tea plantations.*—There can be no doubt that before long, Tea will be largely planted on the Neilgherries. Very excellent Tea has been made on Mr. Mann's plantation without skilled manipulation. This plantation is near Coonoor; 5 acres have been planted out with about 6,000 trees. It has been very much neglected, but the crop last year was 2,000 lbs.; the tea is very fine flavored, and found a ready sale at Rupees 1-4-0 the pound. Some people pronounce it too fragrant, but a good many people at Ootacamund drink nothing else. Mr. Rae took some of this Tea to Bombay, and was offered 2 Rs. per lb. by merchants, for as much as he could supply. Mr. Rae's plantation near Sholar is on a much larger scale, and the plants are most promising. The manipulators lately supplied by Government from Dehra Doon have been preparing the leaf both on Mr. Rae's and Mr. Mann's plantation; the Tea however requires to be kept some time, and is too fresh at present to pass any opinion on. Mr. Rae intends forwarding a sample to Government as soon as it is ready. In Mr. Rae's plantation, the plants have grown finest on rich grass land; they are much poorer in the Sholar Forest land. Some of the trees however in the latter having been left standing (though girdled), it may be attributable to this, but the plants have also been much attacked by insects. Mr. Rae states that every pound of Tea requires 2 lbs. of firewood and 1 lb. of charcoal; if this is the case, Tea planters will have to give considerable attention to firewood plantations.

80. Avenues and Topes.—These are under the Revenue authorities. The increase of existing topes and the formation of new ones might receive more attention in our Presidency. Every village

should when possible have at least one large tope; ryots from the privilege they enjoy of obtaining timber free of taxation for all agricultural purposes might be called upon to give assistance, and much might be done at a very small outlay.

The following are the trees best adapted for the purpose, as they are all valuable for the timber as well as for their fruits. The Mango, the Tamarind, the Jack, the Wood Apple, the Bel fruit and the Ippie (*Bassia latifolia*).

81. Overseers.—Several of the Overseers of the department have been promoted to the grade of Sub-Assistant Conservator with a salary of 150 Rupees per mensem and 30 Rupees travelling allowance. It is hoped that the prospect of promotion after 3 or 4 years service will diminish the difficulty the department has hitherto experienced in procuring efficient men, and will encourage the Overseers to qualify themselves for the charge of a district.

82. Sleepers.—Different lists have been published of timbers supposed to be adapted for Railway Sleepers; most of these timbers have proved failures. The following are the only timbers in our Presidency really to be relied upon.

Native names.	*Botanical names.*
Vengay...	...Pterocarpus marsupium.
Irul	Inga xylocarpa.
Acha	...Hardwickia binata.
Sem	Soymida febrifuga.
Sal	...Vatica robusta.
Tek	Tectona grandis.

Teak is however too expensive.

The Railway Company are getting out an apparatus patented by Dr. Boucherie for preserving woods; this they intend trying on the different jungle timbers in the Chenat Nair Forest.

The iron pot sleeper seems now to have almost entirely superseded the wooden one. If wooden sleepers are however again required, the Railway Company must look chiefly to the Sal forests of Goomsur and the Pennagara Achàwood forests near Salem. The great demand for sleepers several years ago most seriously injured the Salem and Cuddapah forests; thousands of trees were cut only to be rejected, and those accepted were in most cases timbers not adapted for the purpose and only lasted a few months.

83. Ryots not taxed for timber.—Ryots are allowed to cut the unreserved timbers free of taxation for agricultural purposes; this privilege is very much abused throughout the Presidency; it is a very difficult matter to check the abuse of it, or to find out whether timber is really being cut for *bonâ fide* agricultural purposes, or for sale—(Vide Mr. Spring's Report, Appendix N, paras. 18 and 19 and Mr. Lennon's Report, Appendix O.)

84. Conservancy rules.—A New Code of Rules, Appendix A, has just been drawn up by the Officiating Conservator, to be put in force in every district of the Presidency where the department has an establishment. Similar codes have been published and put in force separately in most of the districts. The printed voucher and license system fully explained in rule 17 has acted admirably; it is a great check against smuggling, and has caused a considerable rise in the monthly receipts for seignorage.

Great damage has been done to the forests of our Presidency by the clandestine felling of teak saplings, they are eagerly sought after by the natives for house building purposes, and are generally cut and carried off at night. There has in former years been a considerable amount of good sized teak in the hill forests of the Madura, Salem, and Kurnool districts; this is proved by the stumps, there however is little or none to be found now owing to the practice of felling the saplings having been carried on for many years. Cases have occurred lately on the Pulny hills though we have a large establishment in the district. Simply confiscating the timber thus cut is not a sufficient punishment, and will never check it; it is however hoped that rule 1 of the New Code of Rules strictly enforced will soon entirely put a stop to it.

85. KUMRI CULTIVATION—The destructive practice of burning forests for temporary cultivation and then abandoning the ground to the growth of rank vegetation and weeds, known in different districts by the name of Kumri, Takkal, and Pannikad, has been now nearly put a stop to throughout the Presidency. The only cases that have come to the Officiating Conservator's knowledge during his tours have been in the south east corner of the Cumbum valley (Madura district) and in the forest at the most northern portion of Wynad joining Coorg; they were only slight cases, and were brought to the knowledge of the Revenue authorities.

86. SAW MACHINERY.—The introduction of Saw machinery, either for steam or water power, into any of our forests would hardly answer. Skilled European hands are required, and as the localities are all feverish, it would not be desirable to attempt its introduction. At coast depots, &c., it is better left to private enterprise.

87. HERBARIUM.—There is a considerable Herbarium at the Presidency, but it has not hitherto been in a state fit for reference. The Officiating Conservator has been able to add to it considerably during the year; all the specimens now are being poisoned and mounted on white paper as is done at Kew. Herbarium cases have been made for its reception.

88. BOTANICAL DRAWINGS.—During the year the Artist has drawn a great many new and rare plants, chiefly from the denser forests on the western coast of the Presidency. Appendix G is a list of the drawings executed. Tracing drawings of some of these have been forwarded to Kew. Most of the ferns of the Presidency have also been drawn; these are now in course of publication.

89. CATALOGUE OF TIMBER TREES.—A Catalogue of all the trees of the Presidency has been drawn up by the Officiating Conservator, and is in course of publication. It contains the Botanical names and synonomy of each tree, and the localities in which they are found, and where known, the native names and quality of the wood.

90. FINANCIAL REMARKS.—Though the actual profit for the year is very small, if the large amount of timber cut during the year but not sold is taken to account, the financial results are very favorable. None of the teak cut in the Anamallays has been sold, and very little of that cut in Wynad, Hunsur, Madura, or South Canara. The value of timber on hand on the 30th of April 1863 is Rs. 4,82,361-9, being Rs. 186,808-7-8 in excess of the amount on hand on the same day in 1862. This balance added to the actual proceeds must be taken as the profit for the year, viz :—

	Rs.	A.	P.
Net Profit to Government.....	6,565	9	4
Difference in the amount of timber on hand on the 30th of April 1863 from the amount on the 30th of April 1862.....	1,86,808	7	8
	1,93,374	1	0

Mudumallay, Seegur, Cuddapah and North Arcot, Kurnool, Salem and Nellumbur have all yielded a very good revenue. The timber cut in the Anamallays, Wynad, and Hunsur has not been sold for reasons explained in this report, or these forests would have shown large returns. South Canara after paying the expenditure for conservancy and for a considerable amount of planting, shows a small profit. An increase in the establishment was found absolutely necessary to enable this district to show a good annual return; this increase now awaits the sanction of the Supreme Government. Madura has not paid for its establishment owing to the timber felled during the year not having been sold. This district can pay for conservancy; but to enable it to yield a good revenue, the forests belonging to the Zemindars in the Cumbum valley should be leased by Government, and the forests of the Tinnevelly hills adjoining the Cumbum valley should also be placed under conservancy.

I have the honor to be,

Sir,

Your most obedient servant,

R. H. BEDDOME, Captain,

Officiating Conservator of Forests.

APPENDIX A.

Rules for the Conservancy of the Forests in the Madras Presidency.

1. All parties found felling trees or removing timber or firewood from Government jungles and forests, in breach or disregard of the prescribed rules, will be liable to criminal prosecution for Theft, Mischief, or Trespass, as the case may be, under the Penal Code, and to the confiscation of the timber, &c.

2. The trees and shrubs which fringe springs and mountain streams (to a distance of 20 yards from each bank) are not to be felled. Parties felling or recklessly injuring the same will be liable to criminal prosecution.

3. Charcoal burners or others setting fire to any of the *Government* jungles or forests, will be liable to be prosecuted for "Mischief" under the Penal Code.

4. A list of the reserved timbers and the seignorage to be paid thereon, as published in the Gazette of each district may be obtained by applying either at the Collector's office or at the office of the Forest Department. Copy will also be kept in each village of any consequence in the district.

5. None of the reserved timbers (except Satinwood, Red Saunders, and Sandalwood) are ever to be felled, when the tree is less than 3 feet in circumference at 3 feet from the base.

6. As one of the chief objects of conservancy is to preserve saplings and young trees, and to restrict felling to such trees as have come to maturity, it is hereby ruled that when the reserved trees are found cut, or being brought out of the forests, of a less circumference than 3 feet, the license holder shall be subject to the forfeiture of his license and to the confiscation of the timber.

7. All trees felled must be cut within 3 feet from the base.

8. All applications for license must state whether the timber required is to be brought out of the forest in the rough or worked up, as the latter pays a higher seignorage.

9. All timbers not included in the published list as reserved and bearing a fixed seignorage will be charged with a seignorage of 1 Rupee per (2 bullock) bandy load.

10. Ryots are allowed to cut the unreserved kinds of timber free of charge for agricultural purposes, within their village boundaries; but if they require the reserved kinds of timber, they must pay the fixed seignorage.

11. Villagers are in all cases allowed to cut firewood from low scrub jungle for their own use free of taxation.

12. Where firewood is liable to taxation, the seignorage payable thereon shall be notified in the District Gazette, and in the villages to which the rules may be applicable.

13. The preservation of village topes devolves upon the village authorities, subject to the orders of the Revenue department

14. For the convenience of parties not entitled to the right of cutting timber and firewood, and who may require less than one bandy load, tickets will be issued for bullock, donkey, or head loads of the *unreserved* sorts of timber. The seignorage will be 4 Annas for the bullock load, 3 Annas for the donkey load and 2 Annas for the head load. The *reserved* timbers can only be felled by parties taking out a voucher and license.

15. The seignorage upon bamboos shall be levied at the rate published in the Gazette of each District. Ryots are allowed to cut bamboos for agricultural purposes or for the *bonâ fide* erection of their houses, free of any taxation

16. Charcoal burners shall not fell the reserved timbers, and may only fell unreserved timbers in such localities as shall be assigned to them by the Forest Department. In cases where seignorage is payable upon charcoal, it will be published in the District Gazette.

17. Parties wishing to fell timber in Government Forests shall pay the seignorage for the number of bandy loads required *in advance*, into one of the Taluq Treasuries, and shall receive from the tahsildar a numbered voucher (in duplicate) from the voucher cheque book for the same. The Forest Department, on receipt of the voucher, shall grant a printed license for the number of bandy loads paid for, and shall attach thereto the duplicate voucher, the name of the wood being specified, or (if not one of the reserved kinds) the same being entered as jungle wood. The number of bandy loads shall be

checked off on the back of the license as the loaded bandies pass through the first village, either by the village authorities or by the forest peon or daffadar. When the full number of bandies specified in the license has been checked off on the back of the license, the documents shall be detained and forwarded to the tahsildar, who shall submit them to the Collector in due course.

18. The portion of the forest in which the felling is to take place shall be specified in each license, as well as the tannah station or village through which the timber is to pass.

19. The time allowed for licenses to run shall not exceed three months.

20. Any one felling trees in the forests, or, removing the same, within the limits of the tannah stations, must be ready to produce both his voucher and license when required.

21. Time-expired licenses must be given up, even though the timber paid for has not been removed.

22. All confiscated timber shall be arranged and numbered off into lots by the Forest Officer, and shall be sold by public auction after due notice shall have been given in the District Gazette, and also, if the timber is of much value, in the Fort St. George Gazette. All purchasers will be required to pay the price of the timber purchased into the Taluq treasury, and to produce the tahsildar's voucher for the same before they remove the timber.

23. In the event of confiscated timber being sold by Auction, 50 per cent. of the net profits will be paid to the informer, whether he belongs to the Forest Department or not.

(Signed) R. H. BEDDOME, Captain,
Officiating Conservator of Forests.

APPENDIX B.

CAMP OOTACAMUND, *6th September* 1862

From R. H. BEDDOME, Esq.,
Officiating Conservator of Forests,

To J D. SIM, Esq.,
Secretary to Government Revenue Department,
Fort Saint George.

SIR,

I have the honor to forward answers to your several questions about the Australian Plantations near Wellington.

1st. The extent of land which is to be planted?

Answer.—600 acres.

2nd. The annual cost, every thing included, year by year?

Answer.—From the commencement, *i. e.*, March 1856 up to April 1858, the plantation was under the charge of Captain Campbell, the Officer in charge of the Barracks; he expended in those two years Rupees 5,460-10-10 out of a sum of Rupees 7,500 sanctioned by Government to form the plantation. The following are the particulars of his expenditure for planting eight acres, purchase of seedlings, &c. &c.

	Rs.	A.	P.
To trenching 6 acres at Rupees...	90	0	0
3,300 yards, ditching, fencing and on water courses	618	5	0
15,000 seedlings at 7 Rupees per 100...	1,050	0	0
Seeds and nursery beds...	371	8	6
Baskets	212	1	11
Purchase of land...	700	0	0
Forester's house...	100	0	0
Rifle for shooting wild animals	80	0	0
Ventilating paths	8	2	0
36,000 hard woods including the necessary watering nurseries and fencing...	1,780	9	5
	5,460	10	10

	Rs.	A.	P.
Original grant...	7,500	0	0
Expended by Captain Campbell...	5,460	10	10
	2,039	5	2 balance

handed over to the Conservator of Forests.

Dr. Cleghorn, Conservator of Forests, took the plantations over in January 1858 with a balance in hand as follows:—

Rs.	A.	P.	
2,039	5	2	Balance from Captain Campbell.
2,500	0	0	New Government grant, 3rd June 1858.
420	7	2	Fines, sales of seedlings, &c.
4,959	12	4	

In December 1859, Dr. Cleghorn reported that he had planted above 90 acres, in addition to the eight acres planted by Captain Campbell, and that the total number of trees was two lacks.

His expenditure for the two years (1858 to 1859) was Rupees 5,259-8-6, of which the particulars were as follows:—

	Rs.	A.	P.
Paid Corporal Hall for six months up to 31st October 1859... ...	240	0	0
do. Establishment up to 31st October 1859...	2,407	9	4
do. trenching, &c.	1,643	13	4
do. for seeds, baskets, tools, &c....	968	1	10
	5,259	8	6
Amount expended over the sanction...	299	12	2
	4,959	12	4

In January 1860, Government sanctioned a third grant amounting to 2,500 Rupees.

In the official year 1860-61, twenty-nine acres were planted out with 35,000 trees, and Rupees 1,656 were expended. In addition to this, Rs. 692-7-3 was deducted by Captain Farewell, the Executive Engineer of the Barracks (in whose hands the funds had for convenience been placed) for stores reported to have been supplied in Captain Campbell's time.

In the official year 1861-62, little or nothing was done in the plantations owing to Captain Farewell's having deducted the sum of Rupees 692-7-3. No funds were available; Rupees 333-6-0 were only expended in this year. On May 1st, 1862, No. 933, Government sanctioned a fourth grant of Rupees 500.

3rd. The annual proceeds in a lump.

Answer.—In 1858 to 1861, Rupees 480-7-2 seem to have been realized by fines and sale of seedlings, which amount was expended on the plantations; since that period nothing has been realized until August 1862 when poles cut for thinning were sold for Rs. 82-10-8.

4th. The probable total outlay and receipts?

Answer.—Major Morgan estimates that the expenses attending planting out each acre, if economically carried out, would be 60 Rupees; this however does not allow for the renewal of a single plant, and I think that the expenses would be more likely to average 80 Rs. an acre, even if carried out with strict economy. I strike the difference, which will give a total cost for planting the 600 acres as follows:—

	Rs.	A.	P
Amount already expended in planting out about 130 acres... ...	12,920	7	2
Planting out the remaining 470 acres at 70 Rupees per acre.... ...	32,900	0	0
Total Rupees...	45,820	7	2

It is impossible to give even a rough estimate of what the returns are likely to be

5th. The object of the plantations was firewood; this will, I conclude, be necessary now that the Barracks are re-occupied?

6th. Would it be good economy to sell the place, and start another nearer Jackatalla?

Answer.—Firewood can, for the next five years, be supplied from the Sholas, after that we might commence supplying it from the plantation, although I feel sure that the trees will always sell better as poles for building purposes than as firewood.

(2.) In the Rupees 12,920-7-2 entered as the expenditure up to May 1862, only a small portion of Corporal Hall's (the Overseer's) salary has been included; if it is all debited against the plantation, it will have cost Rs. 17,000; if the plantation could be sold for this amount, it would be very advantageous to sell it, as we could plant the same area for very much less. I doubt however, if we could sell it for one-half of that sum. I much doubt if the receipts of the plantation will ever cover the outlay; as however, there is no chance of selling it, we must now carry out the experiment.

(3.) In conclusion, I must observe that the expenditure is far in excess of what it should have been. The sites selected have been bad, every portion of the ground too has been planted, and in some places, where the soil is bad or where from the steepness the soil has constantly been washed away by the rain, the plants have had to be renewed two or three times, and are still quite a failure. In some portions of the plantations where the soil is good, the growth of the trees has been good.

APPENDIX C.

CAMP CODUR, *6th June* 1862.

No. 29.

From CAPTAIN R. H. BEDDOME,

Officiating Conservator of Forests,

To J. D. SIM, Esq.,

Secretary to Government Revenue Department,

Fort St. George.

SIR,

I have the honor to report that I have explored the Nalla Mallai range of hills in the Kurnool district. This range is about 70 miles long, extending from Chagulmarry (about 40 miles north of Cuddapah) to the southern bank of the Kistnah river, its breadth is nearly 25 miles in the broadest parts.

2. I first ascended the range by a pass near Diggoo Ovalum, and explored the forests to the south of the Nundi ganawa Ghat, descending again into the plains I proceeded along the Western side of the hills to Nundiall; from this place I again ascended the mountains to the north of the Nundi Canawa ghat, and spent a week in exploring the forests to the north of the ghat.—I then crossed the range to Ankeveed on the east. I again ascended the range to the north near the village of Bolapillay, and finally returned to Cuddapah by the eastern side of the range.

3. There are five plateaus of table land upon these hills, which are singularly flat in some parts.

4. The Collector of Kurnool has a bungalow on the Yerra Chalma, a hill not marked upon the Trigonometrical map, but which is close to the Nunty Conda; the climate here is healthy all the year round, and the temperature 12 to 15 degrees lower than in the plains. The elevation is 2,850 feet above the sea. Water however is only procurable at some distance.

5. The Gul Brumeshwar hill, close over and north-west of the ruined temple of that name appeared to me to be the best locality for a sanitarium; there is a considerable plateau there, and water is procurable much nearer than on the Yerra Chalma; it is also considerably higher than that hill.

6. The highest peak on these hills is N. E. of the Gul Brumeshwar temple, and is 3,300 feet high.

7. There are no Sholas or moist woods on these hills, and they are in no way adapted for the cultivation of Coffee, Tea, or Cinchona.

8. The Chinsoocals, a tribe inhabiting these hills, are a most indolent thievish race, and I found them quite useless as far as any aid in exploring event, nor could I get any information from them. The Maddewars, a class of people who extract the dye from the Maddi Chettoo (*Morinda citrifolia*), I found

very useful; they live at the foot of the hills, and are constantly in the forests all over the hills; they are well acquainted with the forest products and their native names.

9. The higher portions of these hills appear to be healthy all the year round. Mr. Arbuthnot, Head Assistant Collector of the District, has a bungalow on a part of the range near Cumbum; he informed me that he has been on the hills at all seasons, and has never caught fever. The Natives do not appear to suffer from it; the jungle at the foot and the bamboo jungles on the hills are, I have no doubt, feverish.

10. These hills are covered from their base to their summits with forest trees. In some parts the hills are very rocky and the trees much stunted, but there is a very great extent of valuable forest land in which the trees grow to a fine size. The jungles north of the Nundy Canawa are finer than those to the south.

11. The following are the most valuable timber trees found on these mountains.

1.	Tek ... ... =	The Teak.
2.	Yeggi ... ... =	Pterocarpus marsupium.
3.	Nalla Maddi . ... =	Terminalia tomentosa.
4.	Jitegee ... ... =	The Rosewood
5.	Billoo .. .. =	The Satinwood.
6.	Yerra Maddi .. .. =	Terminalia arjuna.
7.	Tunki ... ... =	The Ebony.
8.	Nar Yepa ... ... =	Hardwickia binata.
9.	Chiri man .. .. =	Conocarpus latifolius.
10.	Goomer Tek,... ... ... =	Gmelina arborea.

12. Of these the first four are the most sought after by the wood cutters.

1st. The Teak is found in considerable quantities on these hills, and seems to be of very superior quality; but except in the more inaccessible places, it is felled before it attains 6 inches in diameter. I have seen numerous fine young trees only 4 to 5 inches in diameter lying ready to be carted, sixteen of these are placed in one cart, which is charged a seignorage of Rs. 2, Government thereby only receiving a seignorage of 2 Annas per tree I saw no trees or stumps of a greater circumference than 8 or 9 feet, and the tree probably does not attain a larger size on these hills. Most of the larger trees have been cut, though here and there good sized trees are still to be met with; in some cases where they have been felled, the whole tree has been left, and has been more or less destroyed by fire; in some cases only one-half of the timber has been removed, and in no case more than two-thirds.

2nd. Nalla Maddi is the most abundant and the largest timber tree on these hills. It grows to a very large size. I have measured trees 10 and 11 feet in circumference, with a straight trunk 30 to 40 feet high without a bough; this is a most valuable timber and but little inferior to Teak for house building. Indiscriminate felling prevails, and the destruction of this valuable timber annually must be enormous, as every young tree on the outskirts of the forests and in the places easiest of access is felled when it attains 5 or 6 years growth. I saw hundreds such cut of only 5 or 6 inches in diameter.

3rd. Yeggi. This fine timber (the Vengay of our Western Coast) is plentiful on these hills, and attains a fair size; it is perhaps the most sought after of any, and is rarely allowed to grow to any large dimensions. The wood cutters after felling the trees often work the wood up into naves, felloes, &c., in the forests, and carry out the worked up timber on donkeys and bullocks, and load their bandies with the same at the foot of the hills; much seignorage is thereby evaded, as the worked timber pays the same seignorage per bandy load as timber in the rough. When carried away by coolies or on donkeys, seignorage is probably altogether evaded.

4th. Jitegee (Blackwood or Rosewood). This valuable timber is not nearly so abundant as either Nalla Maddi or Yeggi; it is eagerly sought after and felled long before it attains a fair size.

13. The Satinwood grows to a large size. Chiriman and Goomertek are abundant and grow large. Tunki is found in considerable quantities. Yerra Maddi is common near water, both on the hills and round the foot of the hills. Nar Yepa is abundant round the skirts of the hills, and in some of the lower valleys.

14. Seignorage being only levied on the bandy load, young teak and other trees are constantly carried out on men's heads and the tax thereby evaded.

15. Valuable trees of Nar Yepa (the Acha of commerce) are sometimes cut down only for their bark which yields a valuable fibre, the tree being left to rot or to be destroyed by fire.

16. The seignorage is too low in this district, and timber consequently much cheaper than in other districts. The Natives often use teak in building their houses, and make their carts of it and even their ploughs, when other timbers would answer equally well.

17. Red Sanders (*Pterocarpus santalinus*) is only found on the most southern portion of the range, as it has been almost eradicated with the exception of saplings; all felling should cease for the present; Sandalwood (*Santalum album*) is not found on these hills.

18. Government will now perceive that most wholesale destruction prevails in these forests, and it has been rapidly increasing during the last three years. I cannot urge too strongly the necessity of putting these valuable forests under a systematic conservancy, the ultimate benefit would be enormous. The requirements of the district are on the increase. The Railway and Irrigation Company require timber, and when the system of canals is finished, a valuable trade will be opened with the Coast to Madras.

19. I am of opinion that all felling of teak should be put a stop to for several years; that then a seignorage of 3 Rupees per tree should be levied; this would entirely stop all felling of saplings, which is so ruinous.

20. Nalla Maddi, Yeggi, and Jitegee, and other specified valuable timber trees should never be cut under 1 foot in diameter; that in every case where trees of a less diameter are cut, it should entail a forfeiture of the license and confiscation of the timber. With the small establishment that I intend proposing for the conservancy of these forests, it will be impossible at first to charge seignorage upon these timbers by the tree; the forests cover far too great an area for this system. When, however, these forests begin to recover themselves, and an increasing revenue allows of a considerable increase in the establishment, then the stump fee system should be introduced. For the present, however, the seignorage must be by the bandy load, and it must be the duty of the establishment to stop all clandestine felling, and to do all in their power to prevent the felling of young trees, for which there is no excuse, as there are plenty of large trees in the forests, which are now cut whenever large timber is wanted, the saplings only being felled because they are easier to transport, and because they are much nearer the plains.

21. I propose to Government to place these valuable forests under one of our trained Overseers from our Western Forests, and to promote him to the rank of Sub Assistant Conservator upon an increased salary. I shall then be able to nominate a man, who has a good knowledge of forestry, and who has had some years training in the department. If I had to place them in charge of an untrained hand upon a salary of 80 or 100 Rupees, I should not do so with any confidence.

22. The system of promoting deserving Overseers to the rank of Sub Assistant Conservator, and giving them a distinct charge, will induce able men to enter our department as Overseers, and tend to lessen the difficulty we now experience in obtaining the services of good hands as Overseers.

23. I propose an establishment as per margin to commence operations with in these forests. I could not propose a smaller establishment, and I trust that Government will sanction the same.

		Rs.	As.
1	Sub Asst. Conser. ..	150	0
	Horse allowance....	30	0
1	Daffadar..... ..	15	0
10	Peons at 6 Rs. each.	60	0
Per mensem—Total Rs		225	0

24. It is a little in excess of the amount sanctioned for these forests for 1862-63; but I can meet the excess from the amount sanctioned for Cuddapah, as that establishment is in excess of what I consider necessary.

25. The growth of some of our finest forest trees is so large on these hills, that the Nalla Mallai Forest can hardly be overvalued, particularly when the paucity of large timber on the eastern side of this Presidency is taken into consideration. If indiscriminate felling is allowed to continue, the immediate revenue for the next few years will of course be greater than it would under a conservancy system, but the forests must be eventually ruined. If, however, these forests are conserved, and the felling of young trees little more than saplings be immediately put a stop to, they will year by year increase in value, and in a few years hence, when the canals are open, will be in a condition to yield a considerable revenue, and will then require and be able to afford a much larger establishment.

26. The stopping of all felling of teak saplings will cause a decrease in the immediate revenue; but Government must bear in mind that they will be yearly increasing in size, and the timber will when ready to be felled, owing to improved means of communication with other districts, be of greater market

value. The increased seignorage of 2 Rupees instead of 1 upon other valuable timbers, and the increased felling of the same owing to teak felling being stopped, will nearly if not quite cover this decrease.

27. Those forests in 1858-59 yielded a revenue of 4,000 Rupees—this has greatly increased in the last three years, and they are now giving a revenue of about 10,000 Rupees. This is owing to the great increase in felling, particularly in that of teak saplings; no revenue would however be satisfactory if it is combined with the destruction of these forests. As I propose to stop all felling of teak saplings, the revenue at present derived from teak felling will stop; if however we are able to prevent all clandestine felling combined with the increased seignorage upon other timbers, I hope to nearly make up this decrease and to show a revenue under conservancy principles, after paying for the establishment, of about 7,000 Rupees per annum.

28. A good cart road might be made at very little expense from the plains near Nundial up to the plateaus near the Gul Brumeshwar where the finest forests are situated.

29. The following is a list of the trees growing on the Nalla Mallays, and the native names by which they are known to the wood cutters and Maddewars.

Botanical names.	*Native names.*
Acacia amara	Sikkai.
„ Arabica	Tumá.
„ speciosa	Dirasan.
„ sundra	Sundrá.
„ odoratissima	Chensu.
„ stipulata	Chindaga.
Azadirachta Indica	Yepá.
Antidesma pubescens	Nakú gadam
Ægle marmelos	Mamedu.
Alangium hexapetalum	Nulla udagu
Ailanthes excelsa	Pedamán.
Balsamodendron agallocha,...	Condá regi.
Butea frondosa	Mudugu.
Bauhinia racemosa	Aré.
„ variegata	Peda aré,
Boswellia glabra	Ándiki.
Buchanania latifolia	Sára or chárá.
Briedelia spinosa	Karáratti.
„ crenulata	do.
Bassia latifolia	Ippi.
„ longifolia	Advi Ippi.
Canthium parviflorum	Balsu.
Cratœva Roxburghii	Uskiámán.
Chloroxylon swietenia	Billoo.
Capparis grandis	Reygutti.
Careya arborea	Buda darvee (Dudippi)
Conocarpus latifolia	Chiriman.
Cavallium urens	Yerrá poolki.
Cluytia collina	Vodishá.
Cathartocarpus fistula	Reylá.
Cordia myxa	Irkee.
„ tomentosa	Kondá Irki.
Caryota urens	Mari.
Dillenia pentagyna	Parooman.
Dalbergia latifolia	Jittegi.
Dalbergia frondosa	Pachari.
„ paniculata	Jellari.

Botanical names.	*Native names.*
Diospyros chloroxylon	Thuda.
„ Melanoxylon	Tunki.
Dodonœa Burmanniana	Bandani.
Dichrostachys cinerea	Velatura.
Ehretia lœvis	—
Emblica officinalis	Usarika.
Erythrina Indica	Modagu.
„ sublobata	Mulu modagu.
Eleodendron Roxburghii	Niradi.
Ficus Indica	Mari.
„ tomentosa	Kond kal Juvi.
„ religiosa	—
„ tsiela	Juvi.
„ glomerata	—
Garuga pinnata	Garuga.
Gmelina arborea	Goomer tek.
„ Asiatica	Gumudu.
Gardenia latifolia	Iri biki.
„ lucida	—
„ turgida	Yudi manga.
Guatteria fragrans	Chilka dudugu.
Gyrocarpus Jacquinii	Kumar poolki.
Grewia Rothii	Jáná.
„ tiliaefolia	Tharrá.
Givotia Rottleriformis	Tella poolki.
Gelonium fasciculatum	—
Hymenodyction excelsum	Mana bira.
Hollarrhena antidysenterica	Kola mukri.
Helicteres isora...	Guonar dadu.
Hardwickia binata	Nar yepa.
Ixora parviflora	Kori.
Jatropha (N. Sp.) a large tree	Garpa shula.
Lagerstrœmia parviflora	Chinnangi.
Limonia acidissima	Torelaga.
Mimusops hexandra	Nienni.
Mangifera Indica	Mamadi.
Miliusa velutina	Nulla dudugu.
Morinda citrifolia	Maddi.
Milnea Roxburghiana	—
Microchlœna quinquelocularis	Botka.
Murraya paniculata	—
Nauclea parvifolia	Buta karami.
Ochna squarrosa	Kuka moyadi.
Odina wodier	Gumpini.
Pongamia glabra	Kaniga.
Pterospermum Heyneanum	Gubátará.
Pterocarpus santalinus	Chandam.
„ Marsupium	Vengay.
Randia (N. Sp.)	Konda manga.
Salmalia Malabarica	Burugu.
Schrebera swietenioides	Todile ¡ar.

Botanical names.	*Native names.*
Strychnos nux vomica	Mushti.
Soymida febrifuga	Soomi.
Spathodea fulcata	Wodi.
Stereospermum chelonoides	Pula kail.
Semicarpus anacardium	Jiri.
Sethia Indica	Deodari.
Sapindus emarginatus	Kankudu.
Sclerostylis atalantioides	Adavi nim.
Syzygium jambolanum	Narer.
„ alternifolium	Manchi moyadi.
Terminalia tomentosa	Nalla maddi (en maddi).
„ Arjuna	Yerra maddi.
„ bellerica	Thani.
„ chebula	Karaka.
Tectona grandis	Tek.
Trophis aspera	Pakki.
Tamarindus Indica	Chinta.
Ulmus integrifolia	Nowli.
Vitex alata	Mailam.
„ leucoxylon	Looki.
Wrightia tinctoria	Pala muki.
„ molissima	—
Zizyphus jujuba	Renga.
„ xylopyrus	Gotker.

Botanically I did not observe much novelty in these hills; the season of my visit however, though the best for the trees, was the very worst for all the smaller vegetation.

I have the honor to be, &c.,

(Signed) R. H. BEDDOME, CAPTAIN,
Officiating Conservator of Forests.

APPENDIX D.

The Red Sanders tree of Commerce.—Pterocarpus Santalinus. (Linn.)

(Description.) Leaflets always 3, lower ones alternate, or sub-opposite, broadly ovate or orbicular, deeply emarginate; young parts and the under surface of the leaves slightly serous; inflorescence axillary or terminal, racemed or panided, calyx slightly puberulous: stamens equally diadelphous.

Hab: Cuddapah and North Arcot hills, and the southern parts of the Kurnool district.

APPENDIX L.

Statement shewing the number of trees planted in the Government Teak Plantations at Nelambur, probable number of acres, and the value of the same in each year's plantation from 1843 *to* 1862

YEARS.	Number of trees planted.	Acres in each year's plantation	Valued amount.		
			Rs	A.	P
1843-44	53,797	50	186,202	0	0
45	72,964	73	221,013	0	0
46	1,01,703	102	276,700	0	0
47	1,07,000	107	253,157	0	0
48	1,40,800	141	281,182	8	0
49	1,03,880	104	179,738	0	0
1850	1,07,500	108	147,909	4	0
51	1,23,900	124	178,667	8	0
52	37,201	37	43,538	13	0
53	50,900	51	54,936	14	0
54	85,200	85	76,568	12	0
55	1,04,314	104	63,876	6	0
56	93,000	93	40,331	0	0
57	38,000	38	15,325	0	0
58	43,460	43	12,237	0	0
59	38,800	39	8,750	0	0
1860	41,680	42	6,983	0	0
61	83,700	84	9,425	0	0
62	45,000	46	2,586	0	0
Total...	1,473,699	1,471	2,059,117	1	0

NELAMBUR,
14th May 1863.

(Signed) J FERGUSSON,
Sub Assistant Conservator

APPENDIX F.

Directions for Teak planting.

1. The best soil is a strong clay soil, free of all stagnant water, but a black loamy mould with a good sub-soil will answer, but marshy ground and rocky soil should be avoided.

2. To prepare the ground for teak planting, fell the jungle in December or January and burn in March. Prepare nursery beds for teak plants near the bank of a river, if possible, as the seed requires an immense quantity of water; sow the seeds in the middle of April, and previous to sowing steep it in water for forty eight hours; after sowing the seed, cover it over with one inch of earth, and over that lay a covering of straw (to prevent the beds getting dry), water copiously every evening till the seeds germinate, which should be from the twelfth to the eighteenth day; remove the straw when the seedlings break the surface, and water less as the plants strengthen, but keep up a sufficient moisture until the monsoon sets in, when the plants should be ready for planting out.

3. Plant whilst there is rain, and cease planting during the breaks in the monsoon.

4. Make the pits 14 to 18 inches square, and 18 inches deep and 7 feet apart.

1st Season.—Weeding and clearing will be necessary three times during the year. Care must be taken to cut all creepers from the saplings.

Dig and loosen the soil round the saplings once or twice during the year.

Replace all casualties with fresh plants.

Watering necessary during the hot season.

2nd Season.—Keep down all jungle and weed, but digging round the saplings not necessary. Prune in August or September; use sharp pruning chisels; cut off the shoots close to the stem, and let no shoots be carelessly broken off; prune all away except the top tier. In pruning plants with double tops, remove the worst top close to the stem of the other.

3rd Season.—Continue pruning and clearing jungle as before, remove all suckers that may have sprung from last year's pruning, make a clear stem and leave two tiers of branches to form the head; if the branches seem too heavy, foreshorten some of them. Future Seasons.—Remove all jungle, prune so as to keep a clear stem and proportionate head or top. In the fifth year begin to thin out saplings, always removing the worst plants, continue thinning until the twelfth or fourteenth year.

Statement showing the number of coolies required to prepare the forest ground, and to plant out 5,000 trees and keep the same in proper order for one year.

Different operations.	Days of a man.	Rate	Amount.		
Felling the jungle to plant out 5,000 trees	160	4	40	0	0
Burning and clearing the same for planting	177	...	44	4	0
Prepare seed beds and watering after sown	43	..	10	12	0
Planting out of nursery into plantation	67	...	16	12	0
Digging and weeding remainder of season	153	...	38	4	0
Total days.....	600	4	150	0	0

APPENDIX G

List of new and rare plants drawn in the Office of the Conservator of forests in 1862 63

Anonaceæ

Miliusa Hookeriana, (n sp)
Do (sp)
Guatteria fragrans, (Dalzell)
Do Coffeoides, (Thw)
Orophea Erythrocarpa, (n sp)
Do Thomsonii, (n sp)
Alphonsea, (sp)
Atrutegia Wynadensis, (new genus)
Unona pannosa (Dalzell)

Flacourtiaceæ

Phoberos crenatus, (Wight)

Sapindaceæ

Nephelium erectum, (Thw)
Do stipulaceum, (n sp)
Harpullia imbricata, (Thw)

Meliaceæ

Beddomea Sarmentosa, (Hook fil)
Lansium Anamallayensis, (n sp)
Milnea apiocarpa, (Thw)

Aurantiaceæ

Paramignya armata, (Thw.) ?

Balsaminaceæ

Impatiens Denisonii, (n sp)
Do phœnicea, (n sp)
Do orchioides, (n sp)

Celastraceæ

Microtropis, (sp)
Glyptopetalum zeylanicum (Thw)

Rhamnaceæ

Zizyphus Wynadensis, (n sp)

Chrysobolanaceæ

Entosiphon Indicus, (new genus)

Myrtaceæ

Eugenia gracilis, (n sp)
Do Wynadensis, (n sp)

Melastomaceæ

Sonerila tenella, (n sp)
Do rotundifolia, (n sp)
Do acaulis (n. sp)

Leguminosæ.

Crotalaria elegans, (n sp)
Do lanata, (n sp)
Grissaspis cristata, (W A)
Smithia capitata, (Dalzell)
Flemingia involucrata (Wallich)
Vigna Wightii (Benth)

Leguminosæ—(Continued)

Alysicarpus hamosus (Edgew)
Do Heyneanus, (W A)
Do racemosus, (Benth.)
Do Edgeworthii, (n sp)
Desmodium botuloides, (n. sp)
Do podocarpum var Gardneri, (D'C)
Do ormocarpoides, (D'C.)
Pueraria tuberosa, (D'C)
Taverniera Cuneifolia, (Wight)
Pterocarpus santalinus, (L)
Milletia ? (n sp)
Pithecolobium gracile, (n sp)

Valerianaceæ

Valeriana microphylla (n sp)

Rubiaceæ

Hedyotis glabella, (Brown)
Do. aspera ?
Do hirsutissima, (n sp)
Do buxifolia, (n sp)
Ophiorrhiza falcata, (n sp)
Chasalia curviflora, (Thw)
Psychotria, (n sp)
Argostemma elliptieum, (Wall)
Mephitidia Jackiana, (Wight.)
Griffithia, (n sp)
Discospermum, (n sp)
Serissa fragrans, (n sp)
Do Wightia
Do glomerata
Acranthera zeylanica, (Arnot)

Oleaceæ

New genus ?

Myrsinaceæ

Ardisia serratifolia, (n sp)

Asclepiadaceæ

Ceropegia fimbrifera, (n sp)
Do ensifolia, (n sp)
— ?

Styraceæ

Symplocos uniflora, (n sp)
Do rosea, (n sp)

Chailletiaceæ

Moacurra gelonioides, (Roxb)

Begoniaceæ

Begonia minima (n sp)

Acanthaceæ

Strobilanthes Andersonii, (n sp)
Do gracilis, (n sp)
Do. Warrensis, (Dalzell)

Euphorbiaceæ.

Aleurites triloba (Roxb.)
Claoxylon longifolium (Bl.)
Putranjiva Roxburghii (Wall.)
Croton hypolencos (Dalzell.)
Gynoon jussieuuianum ? (Wight.)
Croton drupaceum ? (Roxb.)
Macrœa myrtifolia (Wight.)

Proteaceæ.

Helicia Nilagira (n. sp.)

Urticaceæ.

Laportea crenulata (Gand.)
Hyrtanandra macrophylla (n. sp.)

Santalaceæ.

Pyrularia Wallichiana (D.C.)

APPENDIX H.

Annual Administration Report of the Wynad Forests for the year 1862-63.

Financial Statement.

Hitherto the forest department in Wynad which was raised in 1860 has been one entirely of conservancy; but this year it was determined to work it systematically, but only on a small scale, the establishment being a small one, and the Assistant Conservator having also the charge of the adjoining Mysore forests, which occupied a good deal of his time, and from which he was not relieved till the 31st March 1863.

Rupees 5,000 were at first allowed for working charges, to which a further sum of Rupees 2,000 was added. The account of this money is as follows :—

Actually spent	4,183	15	3
Contingency	183	0	0
Cash on hand	1,078	10	8
Outstanding balance	1,737	6	1
Total Rs....	7,183	6	0
Adding to the cash actually expended, viz :—	4,367	5	3
The pay of the establishment	7,728	4	6
Gives a total expenditure of Rupees	12,095	9	9
While the proceeds realized by the sale of timber amount to, including 400 Rupees deposit money forfeited by a wood merchant for breach of contract...	5,351	1	5
Balance against forest	6,741	8	4

There has however been a large quantity of timber felled and squared in depôt at Untersunta and at different places in the forest viz :—

At Untersunta, ...	cubic feet. 7,227½
In Koodroy Cotta forests, ...	do. 8,400
„ Koorcheat do.	do. 11,852½
Total cubic feet.....	27,480½

To this may be added 2,882 cubic feet of teak and 297 cubic feet of Hona and Muttee felled, squared and removed to a village outside the Toromungal forest on seignorage by the same merchant, whose deposit money of Rupees 400 has been confiscated for the breach of contract; also 1,361 cubic feet of teak removed by another merchant to Audigherry, which is also out of the forest, and who now waives all claims to it as well as to his deposit of Rupees 100; and also 1,368 cubic feet of teak removed to Beemana Colly near Audigherry by another merchant, who agreed to purchase and remove all that could be felled in the Koorcheat forest before the end of April 1863, and as security placed a deposit of Rupees 500 to be forfeited in the event of his failing to do so. This he has completely failed in doing; consequently both his timber and his deposit money must be confiscated.

Neither of these merchants deserves any leniency They had ample time to complete their contracts had they felt disposed, and there is reason to suspect that from the commencement they intended to

act dishonestly by pretending they really intended to purchase this timber so as to keep it out of the market, while they sold what they had purchased elsewhere, and in the event of the Wynad timber being released not to take it at all. This is the only way that their dilatory conduct can be explained. There is therefore a grand total of timber on hand as follows :—

At Untersunta Koodraya Cotta and Koorcheat....	...	cubic feet.	27,480
, Marbustumpurum..		do	2,882
„ Audigherry..		do.	1,364
„ Beemana Colly.		do.	1,368
Total cubic feet of teak, ...			33,091

Also at Marbustumpurum, Honah and Muttee cubic feet 297. Valuing the teak timber stored at Untersunta, which is on the high road to Mysore and distant only 35 miles, at 11 Annas per cubic foot, that stored at Audigherry, Beemana Colly, and Marbustumpurum at 10 Annas, and the Honah and Muttee at 4 Annas per cubic foot; and all lying in the forest, at 8 Annas per cubic foot, it gives a total value of timber on hand of Rupees 18,678-5-3.

The above account of timber on hand differs somewhat from that contained in the abstract statement of work done in Wynad in 1862-63, forwarded on the 27th April 1863, in consequence of some later measurements having been entered. The valuation from the same cause also differs There was also a clerical error in the calculations.

The valuation of the timber on hand has been purposely made very low on account of the large quantity of timber that has been suddenly thrown into the market, overstocking it by the Government Order No 122, dated 10th January 1863, releasing all the timber felled in Wynad and hitherto detained until the ownership of the forests wherein it was felled was decided.

This is also the reason why so much timber has been left unsold; but for this, most if not all of it would have been sold at a much higher price than it is now valued at. Much more timber would have been felled by the Assistant Conservator, had he commenced work at the beginning of the official year, but this he was unable to do in consequence of two wood merchants having previously entered into contract with Major Hunter, then Acting Assistant Conservator of Forests, to fell, paying seignorage, girdled teak trees on their own account—the one to the 22nd October 1862, and the other to November 1862. All the Cooroobers, who are the only axemen to be had, were engaged by them

Resources of the forest

There is still a large quantity of fine timber in the Government forests in Wynad—Teak, Blackwood, Hona, and Muttee abound every where, and in some places there is a good deal of Cedar wood. Unfortunately the only market at present is in the direction of Mysore, and it is doubtful if there will be a sale for all the timber that may be prepared in the course of next year. Were the Periah ghaut however made passable for heavily laden timber carts, thus opening the market on the Western Coast, a very large profit might be expected, provided that carriage could be obtained, of which there does not appear to be much doubt. A fair weather road through the Roodroy Cotta forest could be made at a small cost, the distance being only from 10 to 15 miles to the main road that passes through Manantoddy to Tellicherry, and another similar cart road might be made from the Koorcheat and Chedalet forests to the main road leading to the coast via the Tumbercherry ghaut. Keeping in view the possibility of opening up these markets for the Wynad timbers, there can be no doubt that the Wynad forests are almost if not quite the most valuable forests in the Madras Presidency, and as Teak becomes scarcer, and new roads open up new markets, they will become more valuable every year

The forests belonging to the Palpully Pagoda, to which Government has lately given up all claim, contain a quantity of good timber, and these forests are so mixed up with the Government forests that it would be very desirable to rent them, if the trustees of the temple would agree to reasonable terms.

Overtures have already been made to them with the sanction of the Officiating Conservator by the Assistant Conservator through the Deputy Collector, but their reply was, that their god directed

that they should not lease the forest. This excuse was merely to gain time, and to see whether the Government would come forward with a higher offer. The market rate of timber having fallen so low, it is probable they will soon come to terms, but it would be impolitic to show too much anxiety to have the forests. Were Government to have this forest, they would, with the exception of the Mysore forests, have the entire market in their own hands, and it would facilitate the duties of the Assistant Conservator of the Wynad forests immensely, and increase the difficulty of smuggling Wynad timbers, in fact almost make it impossible, as the only person then who could give a passport to any timber felled any where but in the Mysore forests would be the Assistant Conservator himself.

Boundaries.

Boundary stones have been erected during the past year between the Wynad and Mysore forests from the Bavally river to the Coorg frontier on the line sanctioned by both Governments, and in the south from the Rampore ford to the Goonchee nulla on the new line marked out some years ago by Dr. Cleghorn, and approved of by the Supreme Government. All disputes, which have hitherto been frequent, have therefore been finally put a stop to as far as the Mysore and Malabar boundaries are concerned; but it is most necessary that the lands claimed by the Trustees for the support of the Palpully Pagoda, which consists of a small thatched shed about five feet square on four wooden posts, should be clearly defined. The trustees have given a long list of tracts of land belonging to them with their boundaries on paper, but it is more than doubtful if any man could be found to point them out. It is therefore absolutely necessary with a view to conserving the adjacent Government forests that the temple forests should be clearly defined by having boundary pillars erected every half mile or so.

It is exceedingly difficult to know the boundaries in the dense forests unless clearly marked out by boundary pillars, a ridge of a hill, river or nullah, none, of which in this case exist.

Conservancy

The conservancy of these forests has been carefully attended to by the Assistant Conservator and his establishment, traversing them in all directions and in all seasons. Tukkul has been well nigh put a stop to; only three or four slight cases have been discovered, and in these no Teak was destroyed. They were however reported to the district authorities, but the result has not yet been reported to the Assistant Conservator. That officer is still of opinion as formerly advocated by him that the surest way to put a stop to Tukkul would be to allow the subordinates in the forest department a portion of the fine inflicted in all cases brought to notice by them. At present there is actually no inducement to a Peon on 6 Rupees a month to perform a most unpleasant and unpopular duty, against gangs of Cooroobers or powerful Chetties amongst whom he lives an isolated life, but a sense that it is his duty to do so (which is perhaps too much to expect from a man of his class) or the chance of the Assistant Conservator finding it out himself and punishing him for not reporting it.—But the duties of a forest Peon in Wynad are so distasteful, being much like those of a "Gauger" in Ireland, that probably the thing he wishes for most is his dismissal. For example, during the past year, 9 Peons out of the 14 resigned, and their places were with great difficulty filled up.

The practice of giving rewards to the Police for the apprehension of notorious offenders is common both in England and India, and the Assistant Conservator does not see how a rule rewarding a forest Peon for extra zeal could with ordinary precaution in any way be imposed upon.

Climate

The climate of Wynad towards the west, where the black forests abound, in which most of the trees are evergreens, is healthy during most of the year, but towards the east where the Teak grows, the forests are at times very unhealthy, the most unhealthy months being April and May, when the first showers set in. During the past year of the forest department in Wynad, 1 Peon died and several had to leave dangerously ill, while every man on the establishment as well as the Assistant Conservator's private servants, with the exception of the Assistant Conservator himself, has had repeated attack of fever.

ASSISTANT CONSERVATOR'S OFFICE,
Camp Ootacamund,
8th May 1863.

(Signed) W. A. GIB, Captain,
Assistant Conservator of Forests.

APPENDIX I.

Annual Administration Report of the Hoonsoor Forest for the official year 1862-63.

Financial Statement.

The Forest department received charge of these forests from the Commissariat department on the 25th November 1862.

Rupees 2,000 were granted as working charges—Of this have been actually spent.	1,616	13	9
Balance outstanding	383	2	3
Total Rupees...	2,000	0	0

Adding to the cash actually expended ... ... Rupees...	1,616	13	9
The pay of the establishment	481	3	0
Total...	2,098	0	0
Deduct proceeds by sale of timber amounting to Rupees.	98	1	0
Balance against forest.....	1,999	15	9

A large quantity of Teak timber has however been prepared, viz:—

	Cubic feet.
Outside the forest at Baigoor	5,024¼
In the forest.	6,000
Total cubic feet ..	11,024¼

Valuing the former at 11 Annas per cubic feet, and the latter at 8 Annas, it gives value of timber on hand. ... ... Rupees 6,454 2 9

The whole of the timber at Baigoor would have been sold, and at a much higher price than it has now been valued at, but for the release of the Wynad timbers mentioned in the Annual Administration Report for Wynad.

Resources of the forests and their conservancy

Hitherto the conservancy of these forests seems to have been little attended to; although styled the Hoonsoor forests, they are 30 or 40 miles from that station, and the Commissariat officer there with so many other duties to attend to could hardly give it the necessary attention, and much could not be expected from the old forest writer. The conservancy is now being carefully attended to. A steady European has been engaged as Overseer, and the spoliation which has doubtless hitherto been carried on cannot possibly be continued. There is ample timber fit for felling to give an annual profit to Government of at least 5,000 Rupees for many years to come, so soon as the market recovers its former buoyancy.

(Signed) W. A. GIB, Captain,
Assistant Conservator of Forests.

ASSISTANT CONSERVATOR'S OFFICE,
Camp Ootacamund,
8th May 1863.

APPENDIX K.

Administration Report of the Mudumallai Forest for the year 1862-63

Financial results.

The financial results of the past year are much more satisfactory than those of the previous year, a considerable sale of timber in the forest having been effected. In 1861-62 the profits (debiting the forest with only half the supervision) amounted to Rs. 3,589-6-6, whereas this year a profit of Rupees 18,707-9-7 is shewn, besides a supply of Rs. 4,735-15-0 to the Neilgherry Barracks, and for which no credit is taken.

TABLE A.—*Showing the Financial Results of the Mudumallai Forest for* 1861-62 *and* 1862-63.

Year.	Forest.	Receipts by sale of timber, &c.	Disbursements including salaries, &c. to fixed establishment.	Net profit.	Remarks.
1861-62	Mudumallai... ...	37,936 5 1	34,346 14 7	3,589 6 6	
1862-63.	Do.	62,731 5 0	44,023 11 5	18,707 9 7	

A considerable stock of timber in hand.

TABLE B.—*Showing the Stock of Timber in hand in the Mudumallai Forest.*

		Rs.	A.	P.
3,788¾	Cubic feet of Teakwood supplied to the Wellington Barracks from 1st November 1860 to 30th April 1863, at 1-4-0 per cubic foot ...	4,735	15	0
5,173¼	do. do. at Ootacamund, at 1-0-0 do. ...	5,173	4	0
59,505¼	do. do. at Musingoody, at 0-12-0 do. ...	44,628	15	0
49,559¾	do. do. at Teppecaudoo, at 0-12-0 do. ...	37,169	13	0
58,728	do. do. in Forests, at 0-8-0 do. ..	29,364	0	0
176,755	Total Rupees.....	1,21,071	15	0

Timber Sales. Timber has been sold to the Neilgherry Barracks, Bangalore Barracks, Railway and other Public Works—in fact some 60,000 cubic feet have been disposed of, leaving a stock in hand of 176,755 cubic feet—Table B.

Roads. The roads were very bad during the past year; owing to the continuous rain from May to February, the difficulty of carting was much enhanced.

Cooroombers. The great demand for Cooroombers by the Coffee planters had given much trouble, but fortunately we did not require to fell so much this year as usual, consequent upon the great uncertainty that existed as to the renewal of the lease.

Sawyers. Only 5 sets of sawyers have been regularly at work, but they have sufficed for the work.

Elephants. The forest elephants have not been increased, and the Commissariat elephants were found so useless that I was obliged to get rid of them.

Buffaloes. The buffaloes have been of much use in dragging the small logs from depôts in the forest to the road side.

Cart contractors. A number of men received advances this year, as it was imperatively necessary to be in a position to remove the whole of the timber if the Rajah refused to renew the lease—about 100,000 cubic feet were brought from different parts of the forest to the karkana; of this 50,000 cubic feet were sold to merchants on the spot, thus saving much trouble, and the remainder would have been at once removed to Teppecaudoo out of the forest and distant six miles, when in March the Rajah agreed to renew the lease, consequently we have a large stock of timber in the forest to meet any demands.

Depôts.

The depôts in Ootacamund, Musnicoil, and Teppecaudoo are well supplied with seasoned timber (Table B.) to meet the demands of the Lawrence Asylum, Neilgherry Barracks, and other public buildings.

Monthly Bills.

The system of auditing the bills monthly has worked well since the order was issued two years ago. The expenditure has been 93,058-12-5, and the amount passed 80,880-9-10, leaving a balance of only Rupees 12,178-2-7 to be adjusted. This consists of cash in hand, 693-3-11, four months' provisions in store, and advances to cart men. If necessary, bills for the amount could be furnished in five months; but seven years' experience of working this forest has taught me; that we cannot carry our timber so cheaply or so expeditiously as the contractors can, and it will be always necessary to have some carts. Just before the close of the lease, I had more than one hundred contractor's carts at work in the forest, besides some twenty-five Government carts.

(Signed) H. R. MORGAN, Major,
In charge of Mudumallai Forest.

CAMP MUDUMALLAI,
May 1863.

APPENDIX I.

Administration Report of Segur Forest for the year 1862-63.

The total expenditure for the year including supervision has been Rupees 13,570-0-6, and the receipts 27,641-4-3, shewing a profit of 14,071-3-9, or very nearly the same as last year, with the exception that 4,337-10-0 Rupees worth of prepared Sandalwood were in the godowns ready for delivery to the merchant, but who failed to receive the same until a few days after the close of the official year. Had his amount been realized, the profit would have exceeded last year's by nearly 4,337-10-0 Rupees allowing the cost of supervision to be the same in both years.

TABLE A.—*Showing the Financial results of the Segur Forest for* 1861-62 *and* 1862-63.

Year.	Forest.	Disbursements including supervision, &c.			Receipts by sale of wood.			Net profit.			Estimated value of wood on hand.			Remarks.
1861-62.	Segur.	* 5,643	0	5	25,006	11	4	19,363	10	11	10,790	14	11	* In this 4,806 supervision is not included. No Sandalwood in store.
1862-63.	do.	13,570	0	6	27,641	4	3	14,071	3	9	16,240	6	5	Of this, 4,337-10 0 is the stock of Sandalwood in store

There has been no teak felling in the Segur forest during the past year with the exception of a few logs squared.

A small experiment has been commenced at Musnicoil of a Sandalwood plantation; the plants are looking well. At Tullamallai also several thousand young plants have been raised in nurseries to be put out this year.

There is still a considerable amount of Sandalwood at Tullamallai and Hassanoor, and the work of preparing Sandalwood is vigorously carried on.

CAMP MUDUMALLAI,
25th May 1863.

(Signed) H. R. MORGAN, Major,
In charge of Segur Forests.

APPENDIX M.

Salem and South Arcot Forests.

1. *Establishment.*—The only changes during the year have been my assumption of the charge of these forests in September 1862, and the entertainment in January 1863 of an Overseer for that portion of the forests which is situate in the South Arcot District. The forests in the Salem District are so scattered, more particularly on the eastern side, that the real work of conservation, the prevention of injudicious felling by keeping a watch over the fellers, cannot be carried out; the peons are therefore stationed at the most convenient places to check the licenses and tickets.

2. *Sandalwood.*—During the year Rupees 2,490-10-10 were expended in the cutting, dressing, into billets, and carriage of 168,052 lbs. of Sandalwood. 73,040 lbs. have been sold at the rate of Rupees 3-4-7 per maund of 28 lbs., realizing Rupees 8,572-14-8; 95,012 lbs. remain in the different depôts in the forest. Part only of this is dressed into billets, the remainder, is in the rough; its value may be set down at Rupees 16,000, but the cost of carrying to the store has yet to be met. Some months will elapse ere the whole can be gathered into the store at Denkincottah, and the value of it will not be brought into account until the end of 1863-64. Much of the wood is bad, being hollowed and decayed; the damage was done many years by the cutter, the Poojaries notching the trees to see whether the heartwood was large enough to repay them the trouble of felling it; the trees left in the notched state invariably decay in the centre from water finding a place to lodge. I have endeavoured, and with fair success, to put a stop to this destructive practice, but the Sandalwood will for some years to come bring in a smaller price than it should do on account of so large a proportion of the wood delivered being from this cause fit only for use by Hindoos in the ceremonies of their religion.

3. *Sleepers.*—There has been no demand for timber for sleepers during the year. The amount of seignorage shewn under this head, Rupees 2,508, belongs to the accounts of last year, when the value of sleepers delivered in 1860-61 Rupees 38,757-3 was brought to account, and that shewn this year, Rupees 2,508, is the cause of the great apparent falling off in the revenue derived from this forest.

4. *Timber.*—The demand is steadily increasing, and the seignorage, since the introduction of the new rules in November last, has gradually returned to its former average with a fair prospect of progressing beyond it. This result may be attributed to the facility with which licenses and tickets can be procured, and to increased vigilance in supervision tending to a gradual lessening of the smuggling which has hitherto prevailed to a great extent. Licenses can now be procured at no less than 11 towns and villages, and tickets at 17 places; formerly licenses were procurable only at 3 and tickets at 4 places. To the facilities thus afforded must be attributed the increase of seignorage from Rupees 441-3-0 in August 1862 to Rupees 1,524-11-8 in April 1863.

5. *Working Charges.*—Of the Rupees 5,000 sanctioned for the year, Rupees 363-5-7 were expended in paying up the extra establishment. This was reported by my predecessor, and forms a portion of the annual report for 1861-62. A sum of Rupees 915-4-0 was also rendered unavailable. My predecessor drew it from the Treasury and paid it in again, it remained on the books as an outstanding advance, and the error was only rectified in April 1863, when it was too late to utilize it; it now remains in hand, and will form a portion of the working charges sanctioned for 1863-64. Another sum, Rs. 63-6-9, is at present under reference. Hence but Rupees 3,607-15-8 were available, and the operations have been somewhat restricted.

6. *Timber seized.*—This is chiefly wood arrested by the tannah peons as unprotected by a license or ticket; a portion is now being carted into Oossoor, where it will find a good market, and the rest into Salem. A fair amount will be realized as much of the timber is well seasoned.

7. *Forest products.*—These were collected for a few months at a cost of Rupees 289, and produced, when sold under disadvantageous circumstances, Rupees 362; a small portion was destroyed by exposure to the weather, or the result would have been more favourable. The profit, however, is 25 per cent. on the outlay. I have stated the advantages of continuing the collection of these products in my report on the subject.

8. *South Arcot District.*—It took some time to fix upon the proper stations for peons, tannahs, and to prepare licenses and tickets, the former being printed in Madras under the direction of the Assistant

in charge of the Central Office. The conservancy may therefore be said to have but commenced, and as the receipts on account of the forest conservancy have not hitherto been kept distinct from the rest of the revenue accounts, it is not possible to state even approximately the amount collected. The receipt having been "fees for cutting fuel and firewood for domestic and agricultural purposes," are not probably small, but if, by conserving the eastern slopes of these hills, the illicit felling which has been carried on on the western slopes be somewhat checked, the result will be beneficial though probably not very profitable.

9. *The checking of licenses and tickets.*—Much difficulty is experienced in checking licenses and tickets properly; but one peon can be stationed at each tannah, and he cannot be always at his post. The cartmen aware of this take every opportunity of passing a tannah during the night, or when they know the peon to be absent. From the number of bye-roads made each dry season in every direction to avoid passing a tannah, it is impossible thoroughly to put a stop to smuggling, and the establishment is not large enough to watch every large outlet. One great cause of the prevalence of smuggling is the small pay allowed to the peons; these men are on duty day and night, and their pay is but Rupees 5 per mensem. The taluk peons, whose duties are by no means so severe, receive Rupees 6 per mensem. The only men consequently who will enter are of a lower stamp than should be entertained, and they naturally use their best endeavours to make up for the deficiency of pay by receiving money to pass wood instead of arresting it. I have endeavoured to check this by directing the periodical removal of the peons from one tannah to another; this has already proved beneficial, but it has caused several of the peons to resign their situations, as they state that it is only by living with their friends that they can support their families, and that if moved they incur expences beyond their means.

10. The receipts from all sources are Rupees 22,548-13-4; of this but Rupees 8,572-14-8 is derived from Sandalwood; the expenditure amounted to Rupees 13,078-15-3, leaving a balance on the year of Rupees 9,469-14-1. But there are either in the depôts or being brought into store 95,012 lbs. of Sandalwood, the results of advances made during the year which, at a moderate valuation may be set down as worth Rupees 16,000.

SALEM,
18th May 1863.

(Signed) EDWIN BORRADAILE, Lieutenant,
Asst. Conservator of Forests, Salem and South Arcot.

APPENDIX N.

From MR. T. SPRING,

Sub-Assistant Conservator of Cuddapah and North Arcot Forests,

To CAPTAIN R. H. BEDDOME,
Officiating Conservator of Forests.

SIR,

1. I have the honor to submit my Annual Report for the official year ending 30th April 1863.

2. At the outset I may be permitted to observe, that I entered upon the duties of my present appointment under very disadvantageous circumstances. The stability of the department had already been *mined, the entire revenue expected from the Cuddapah forests being absorbed by the charge of conservancy. Thus through the late Assistant's mis-management had this branch of the Office been placed in a most unenviable position, and its business thrown into a state of confusion. When I was selected by Major Morgan to assume charge of it, I had already received a five years' training in the Forest department, and not unreasonably, I trust, indulged a hope that my transfer to the post I now fill, would have been accom-

*Proceedings of Government, No 933 of 1st May 1862, para 13.

panied with my promotion to the rank of a third Class Assistant; but it would appear that some sacrifice was necessary, and I was accordingly nominated a *Sub-Assistant* * on a salary of Rupees 150 per mensem with Rupees 30 Horse allowance: it being understood at the same time, that this reduced remuneration should include the supervision of a part of North Arcot also, in conformity with the Orders of Government, dated so far back as 27th June 1861, though those orders had no practical effect whatever until my arrival here, when Government were moved to renew them, and the section of work referred to has since been going on with an establishment costing Rupees 44 a month.

* Proceedings of Government, No. 1537, dated 10th July 1862, paras 3 and 5.

3. Here I imagined all difficulties to have ended; but unfortunately fresh ones presented themselves, not alone from the prolonged investigation into Mr. Morison's proceedings, but from the Collector's anxiety to draw a territorial limit between the Forest and Jungle Conservancy departments, pending the final determination of all which matters I was desired to issue no licenses. Of course I considered myself bound to obey these instructions; but when I found that the Forest department was debited with my allowances and those of my establishment for June and July 1862, and no corresponding credits given in the accounts, I waited on the Collector in person, and that Officer was pleased at length to decide that from the 1st of August 1862 all collections made through my agency were to be credited to the Forest department, and that I was to take charge of the Rajampett, Sidhout, and Budvail taluqs.

4. *Forests.*—The Forests in Rajampett taluq are those situated at Balpilli, Shettigunta, Budugunta-pulli and Yerraguntla Cotta, extending as far as Othaloor, and Thepiapulli on the west, and the western face of the Venkatigherry and Chethavail Hills on the east. To guard these forests, which are 45 miles in length on both sides of the taluq, I have at my disposal, but *four* peons, stationed as follows.

Balpilli...	..	..	...	...	1 Peon.
Buduguntapulli	...	...	...	...	1 „
Yerraguntla Cotta...		...	...	...	2 „

The villages at the foot of these hills comprise Balpilli, Shettigunta, Buduguntapulli, Yerraguntla Cotta, Gathala nookanapulli, Othaloor, Thepiapulli, Unnasamathrum, Streerunga-rajapooram, Pulpathoor, Pathoor, Aulpoor, Obellampetta, Ellagacherla, Chitvail, Nuggerry-paud, and Nagaveram. These villages have free access to the jungles for timber, and it clearly requires the constant vigilance of more than *four* men to check depredations. I beg to annex * copy of a letter from the Tahsildar of the taluq, from which you will perceive that the services of ten peons are necessary to enforce strict conservancy.

* Vide Appendix A.

5. The principal forests are situated at Yerraguntla Cotta, and as they require more prominent notice, I trust the introduction here of the following Extract from my Report submitted on a former occasion, will not be deemed out of place.

"*Yerraguntla Cotta.*"—This village lies at a distance of five miles from the Railway Station due west of Codoor. Yerraguntla Cotta, once the seat of some Patan chieftain, has a fort or citadel now in ruins From hence there are two tracks into the forests; the one to the south west of the village leads direct to the hills with a good cart road for about 2½ or 3 miles, and from hence a bridle path leads to the top of the hills into the valley on the other side, forming one continuous route to the Gurumcondah taluq, first skirting the most south easterly portion of Royachote. Another track runs south from the village for about 9 miles on which carts proceed with little or no difficulty; here the carts halt owing to the jungles becoming gradually thicker, and to this spot the timber is dragged and loaded.

The Yerraguntla Cotta forests are subdivided into Palakurava, and Goondal Salin hera and Chellal Konas.

Palakurava.—This forms the first sub-division, and in consequence of its proximity to the village has been denuded of all its best timber. The Nar yepa (*Tel.*) Atcha (*Tam.*,) (*Hardwickia binata*) grows on very gravelly soil, and prefers the plains to tops or even slopes of hills, and is but sparse. I am certain that did it but form an article of trade in Madras for house building purposes, not one tree would have been spared at this date. It is in some demand in the North, but no native in the South, especially in Madras, will use this wood, as the word Atcha is synonymous with Ichabod, or literally, Is it over? meaning thereby, that were this wood used for their house building purposes, the cry would always be with regard to their good fortunes: Atcha! Atcha!

Gundal kona.—This portion of the forests is so precipitous that wood merchants or their agents have not deemed it profitable to work it, in consequence of which conservancy appears to be strictly observed here, and the Red Sanders (*Pterocarpus santalinus*) is so plentiful and of such superior quality, that I would advise this portion be named in the license where they are to confine their operations.

Saliuthera Kona.—Here the Red Sanders is very scarce, as well as other trees, which are intended for timber. It chiefly consists of bamboos, and even these are of inferior quality.

Chellal Kona—This portion, like that of Gundul kona, has been scarcely visited by wood cutters, not on account of its steepness, but its distance and want of good cart road from Yerraguntla Cotta. The Red Sanders grows here in abundance, and of the third sort, viz., 30 to a bandy, and I would select this also as a portion of the forest to which merchants should be restricted to for obtaining their wants.

6. *Sidhout taluq.*—This taluq is situated between the Rajampett and Budvail taluqs, having the former to the south and the latter to the north. From the present appearance of the forests, there is little doubt that they have been denuded of much valuable timber. Excluding the brushwood that skirts the base of many ranges of hills, the principal jungles requiring attention are those of Polconda, Mulliemconda, Lunkamallais, and a portion of the Nullamallais.

Polconda.—The Polconda range skirts the southern side of this (Sidhout) and a portion of the Cuddapah taluq.

Mulliemconda.—This range forms the natural eastern boundary of the Cuddapah district and divides it from that of Nellore. It runs in a north west direction from Sanacilla to Pillootacanomah near Chinnavarum.

Lunkamallais and a portion of the Nullamallais.—These hills run in a north west direction and form the boundary of the taluq for about 13 miles, before entering the Budvail taluq. The forests lie on the hills about 8 miles in a northerly direction from Rajampett, a small village on the banks of the Pennair, and only a mile west of Sidhout. A wheel track leads from Rajampett to the foot of the hills nearest the place where the forests lie, a distance of about 5 or 6 miles. A steep and winding foot path leads to the summit of the hills; two miles beyond this the forests begin, are denser further on, and extend about five miles in a northerly direction.

7. For the protection of these extensive (though not at present rich) forests, I have at my disposal three peons, so posted however as greatly to tax their energies, and to demand their unremitting attention throughout the year, and several complaints were made to me by these men as to their inability to do their work efficiently. I was necessitated to call upon the tahsildar of the taluq, to know what number of peons he considered requisite to guard the outlet, and prevent clandestine felling. His reply is herewith forwarded for your information.

8. The above forests, when in their primeval splendour, must have poured forth their riches to the first intruders; but the rude relentless axe has changed sadly their aspect in some places, where instead of majestic trees, are now to be seen barren rocks, and dry beds of rivulets for once pleasant and purling streams. One of the main causes of the devastation observable is evidently the facility which the Pennair affords to merchants for floating down timber to the Nellore district. Large quantities are clandestinely cut and brought down to villages along the banks of the river, and there secreted in pits covered over with hay-stacks. No sooner do the freshes set in than they are dug up overnight, conveyed to the waters edge, and lashed to rafts which are then floated off. These illicit practices will soon, however, I have reason to hope, be given up entirely, for I have spared no pains to discover and confiscate all such timber during the past season, conceding to the parties the privilege of paying into the Treasury the seigniorage, not selling the timber by public auction.

9. The villages visited by me in the Sidhout taluq are, Nundaloor, Muntamumpulli, Chintarou pollium, Bankrapett, Cunnamanapulli, Muchpulli, Mullailputnam, Condoor, Cummalcoor, Maudpoor, Ramapoor, Bramanapulli, Hoblum, and Wontimitta.

10. *Budvail taluq.*—The forests in this as in the other taluqs are situated on the hills running almost in parallel lines in a north westerly direction. Those on the east are called the Elleegundah, and those on the west the Nullamallais.

Elleegundah forests.—These forests run throughout the entire length of Budvail, dividing it from the Oodagherry taluq of the Nellore District on the east. Here, too, the destruction has been consi-

derable, owing to the accessibility, without let or hindrance, of the people from Nellore. This destruction is particularly vast towards the north; the timber is brought down from the hills to a village called Jillalah, there stored, and eventually carried off to Cumbum. While in the Budvail taluq, I was informed of the circumstance; but before I could reach the spot, a great portion of the wood had been removed or secreted. I succeeded however in seizing a small quantity, which realized Rs. 100 at auction.

11. There are several ghats on these hills, which enable wood cutters to bring away timber without molestation—the three principal ones are Zerrathacanama, Seetaramapooram, and Tharnal ghats, all leading into the Oodagherry taluq of the Nellore district.

12. *Nullamallais.*—These valuable forests are situated to the west of the taluq commencing from the Singarozah ghat on the south and extending to the north as far as the Sheroovalee taluq in the Kurnool district. My time while here was so limited that I could not inspect the forests with any degree of satisfaction to myself, and besides my establishment (both private and public) were completely fatigued and prostrated, and I could not with any propriety force them to accompany me up to the hills. I however visited the villages situated at the foot of the Nullamallais, viz., Mullapulli, Shevooshettypulli, Morryconta, and returned by Jillalah, Knowlcoonta, Takoorpett, and Poremamallai.

13. To preserve these extensive forests I have at my disposal but *two* peons. I found here that my remaining altogether inactive would materially injure the interests of Government, and therefore after satisfying myself of the number of peons actually necessary for this taluq, I called upon the tahsildar for his opinion on the subject, and this will be found in the Appendix.

14. *Timber trees.*—The forests of the Cuddapah district yield the following timber trees:—

Red Sanders	Pterocarpus santalinus.
Nar Yepa	Hardwickia binata.
Thumba	Vatica Tumbugaia.
Jallaree	Laccifera.
Yeggi	Pterocarpus marsupium.
Billoo	Choloroxylon swietenia.
Ippi	Bassia latifolia.
Palla	Mimusops hexandra.
Dirisana	Acacia speciosa.
Gittagee	Dalbergia latifolia.
Eramadis Nellamaddi	Terminalia tomentosa.
Yellamaddi or Siri man... ...	Conocarpus latifolius.
Botocadamee or Bota ganapa	Nauclea parvifolia.
Rella	Cathartocarpus fistula.
Thudda	Pterospermum Heyneanum.
Telau	Acacia odoratissima.
Nevali Adugu	Vitex alata.
Karakaia	Terminalia Chebula.
Soimida or Somi	Soymida febrifuga.
Toomida	Diospyros melanoxylon.
Sundra.	
Tuandra.	
Saravey.	
Nellabalasu.	
Ganthama.	
Tumika.	
Moostee	Strychnos nux vomica.
Mayee.	
Godelpulsoo.	
Coombadri.	
Teak...	Tectona grandis.

Yerra Polekay.
Googelum.
Patcha Botca.
Erra Botca.

15. *Rules for the Department.*—The rules for the conservancy of the Cuddapah and North Arcot forests operate well and are being strictly enforced. Measures have been taken to frustrate every attempt at peculation, parties requiring timber being obliged to pay the money in advance into the taluq treasury, and on the presentation to me of the tahsildar's printed and numbered receipt, to obtain a printed license corresponding with such number. This check of the forest on the revenue and the revenue on the Forest department has worked so well that I need hardly say any thing further on the subject. Wood merchants however, do not yield that respect to the department as formerly; they imagine that a certain amount has to be deposited by them in the treasury, when they immediately purchase a right to act as they please in the forests. I have had to exercise great patience in enforcing the rules so far as the quality and quantity of the timber are concerned, relaxing somewhat that which restricts them to the time they originally apply for to remove the timber, for I have frequently witnessed the difficulty they had in this respect to encounter, not only from the wood cutters falling sick in the jungles, but also from the fraudulent conduct of these men in receiving advances from one and working for another.

16. *High rates of seignorage.*—That the rates are rather high cannot be doubted; but at present this seems to be unavoidably necessary, and must continue so for another four or five years to admit of a renovation of the forests. The havoc committed has been very great, and our precautionary measures cannot justly be complained of. Government in Minutes of Consultation, No. 4526 of 5th November 1859, called upon the then Conservator of Forests to report on the statement of the Collector regarding the wasteful system pursued to the detriment of the forests in this district. It must have been long prior to that date that this system was originated, and although an Assistant was appointed on the 17*th August* 1830 you are aware that up to the commencement of the *present official year* no conservancy was enforced.

17. Although, as above stated, these high rates of seignorage must continue for the present, without any very large profit accruing immediately in money, yet the preservation of the forests, it is hoped, will be considered a substantial though prospective gain. Besides, the yield of the Red Sanders roots from the Balpilli and Shettigunta jungles alone has been such as, after covering all expenses on account of establishment, &c., exhibits a fair return to Government. This demand will continue till at least the Palpilli cuttings are completed and the Railway runs up to Codoor, when I purpose opening out for these dye roots the Budugantapulli and Yerraguntiacotta jungles, to clear which will take another two years. Then after the expiration of four or five years, reduction of the seignorage rates might safely take place. It should however be borne in mind that the revenue has not been solely on the Red Sanders, and that the timber trade is entirely shut out, but that the proportion is 3 to 1, as timber of various descriptions is still being applied for.

18. *Firewood.*—The question of firewood required by ryots still remains a vexed one. I have imposed no restrictions on them in regard to leaves needed for alkaline material or wood for agricultural purposes. Timber for house building has also been granted free of charge, but I have always insisted that this exemption should not be extended to timber cut for sale. The difficulty, however, is to distinguish what wood is cut for one's own use, and what for purposes of traffic. I have visited above one-half of the villages in the three taluqs, and found from fifteen to twenty bandy loads of firewood in each villager's yard, more especially where the sugar cane juice and turmeric were being boiled down. The answer to my enquiries invariably was for *domestic purposes*, while the party engaged in trade was sure to be found next door with a license in his possession for four or six bandy loads ready to be produced to ward off all suspicion.

19. That there has been a heavy loss to Government under this head is unquestionable, and owing to the small number of peons at my disposal, I am unable to apply an effectual remedy to the evil. In elucidation of what has just been stated I may here mention certain facts.

When I visited in March last the villages of Bankrapett, Cunnamanapulli, and Bundy Convoi in the Sidhout taluq, I found very large quantities of turmeric being boiled down. On my questioning the Reddis and afterwards the Tahsildar whether seignorage was collected on the firewood so used, I was told that ryots were not obliged to pay the rate. Thereupon I addressed the Head Assistant Collector on the subject, who issued orders for the collection. With a view to its accomplishment, I posted a patrol between the abovenamed villages at my own expense, and through his instrumentality a sum of Rupees 87 has been collected by the heads of the villages during March and April 1863.

In further proof of the loss adverted to I shall adduce another fact. To boil down one crop of an acre of Indigo leaves takes one bandy load of firewood, seignorage 8 Annas; there are always two crops to an acre; hence it follows that two bandy loads of firewood are necessary per acre, and that a seignorage of one Rupee thereon should be paid. From my own observation and from the reports of the several Tahsildars I should say there are not less than 8,000 acres of land under Indigo cultivation. Consequently the conclusion to be arrived at is that Government should have received as seignorage under *this* head Rupees 8,000 during 1862-63.

What number of acres is under sugar-cane cultivation I have not been able as yet to ascertain, but the extent may be easily inferred as follows. It takes a bandy load of wood to boil down the juice produced from one koonta; then as there are 40 koontas to an acre, every acre should pay a seignorage of Rupees 20. This revenue, added to what should be derived from firewood for turmeric, &c., I have no doubt will amount to another Rupees 2,000; thus the seignorage on firewood in the three taluqs of Rajampett, Sidhout, and Budvail should be Rupees 10,000 per annum.

20. *Plantations.*—Before the setting in of the last monsoons I had a small portion of ground on one of the hills at Balpilli cleared, and during the rains had it sown with the seeds of the Red Saunders. I regret to state the experiment proved a failure; but as Government have been pleased to sanction an expenditure of Rupees 200 on this undertaking during 1863-64, I contemplate the adoption of a different *modus operandi*, and trust to ensure success. I have observed several trees loaded with seeds, and as all these very probably dropped, one would be led to infer that one-half must have germinated. Indeed, I have no doubt such was the case, and that the scorching heat on these hills, combined with cattle depredations tended to destroy the tender plants, only those in well sheltered localities escaping. I purpose therefore to sow the seeds in wicker baskets, keep them under shade and watered until they attain an age sufficient to resist the heat, and after that to plant them out on grounds well secured against stray cattle.

21. *Gardens belonging to Chinna Chellama Reddi at Mantapumpulli.*—These gardens are situated midway from Nundaloor to Wontimitta. At a distance first a green spot appears like the deceitful miraze to tantalize the eye of the weary traveller, but on a nearer approach he realizes an oasis where he has but to present himself to receive a kindly welcome. I have been through these gardens and found growing in rich luxuriance, the

Cocoanut trees	Citron.	Pomegranate, sour.
Mangoes, Guavah.	Northum Coy.	Do. without fruit.
Do. Bombay.	Country Gooseberry.	Vine.
Cashewnut trees.	Plantain, large.	Large Fig trees.
Almond trees.	Do. small.	Mulberry.
Jack fruit trees.	Do. Bengal.	Red Roses.
Pumpelmose trees.	Do. Red.	White do.
Orange, large.	Guava, large.	Pink do.
Do. small.	Do. small.	Jasmine.
Limes.	Papaw tree.	Do. large.
Long limes.	Pomegranate, sweet.	

I am aware that Government are anxious that the wealthier portion of the ryots should plant largely, especially when the profits to be derived are certain, but I regret to state that nothing will rouse them from their present apathetic state, as not one of them would venture to plant on soil that he considers *immediately remunerative*. If Government would bestow some notice on one or two deserving individuals, it could not in my humble judgment fail to be attended with the happiest results, and to

stimulate others to such laudable enterprises. In March 1859 Dr. Cleghorn reported on the garden belonging to the late Surya Prakasa Row at Ankapilli, 24 miles south west of Vizagapatam, and recommended to Government the grant of a silver medal and certificate to his family, which was at once complied with. Were some similar mark of approbation conferred on Chinna Chellama Reddi, it would, I can unhesitatingly affirm give great satisfaction throughout the district, where he is both highly respected and esteemed.

22. *Railway department receiving house at Shettigunta.*—A large number of merchants from Triputti and Yerraguntla Cotta have waited on me on different occasions, and solicited me to bring under the notice of authority the desirableness of erecting a receiving house at Shettigunta. Apprehensive, however, that I might incur the imputation of presumption, if I venture to offer any suggestions in respect to a matter which might perhaps be viewed as not falling at all within the immediate scope of my labors in the public service, I have hitherto felt reluctant to put forward the request of the native merchants alluded to; but I am now so satisfied as to the reasonableness of such request, that laying aside reserve, I beg, with deference, to recommend that the sanction of Government be obtained for the necessary accomodation for their goods. Timber for the Madras market, taken either from the Balpilli or Shettigunta jungles, will have to be conveyed either to the Triputti station, a distance of 12 and 16 miles respectively, or to Codoor, which is 7 or 12 miles distance from those jungles; and if within the Trittany and the Triputti stations, a distance of 35 miles, I believe, there are *three* station houses, surely the public may expect *one* receiving house to be erected between Triputti and Codoor, a distance of 27 miles.

23. *Permanent enclosures to Wells.*—It is with deep regret I have here to refer to the death of a Mr. Pine of the Irrigation Company, which occurred about three months ago in this wise. While returning of an early morning from Cotapaud to Wontimitta through a paddy field which was inundated at the time, both horse and rider were suddenly precipitated into a well, and in the struggle to extricate themselves, Mr. Pine got under the horse, whereby he was so severely injured that he sunk to rise no more alive. This fatal morning's sad catastrophe might in all human probability have never taken place, had the Collector's repeated instructions regarding the necessity of surrounding wells with a parapet published in the District Gazette been attended to. These orders will remain a dead letter, unless the Collector makes it imperative on the Reddi of each village to see them carried out, and attaches a heavy penalty to any dereliction of that duty. I met several of these wells in such close proximity to the road, especially in the Sidhout taluq, as to render travelling of a dark night extemely dangerous. Were the Public Works Department directed to undertake the work at the cost of the several owners, Government would confer a blessing on the people, for it is idle to suppose that the ryots will ever enclose these wells without being compelled to do so. The annexed memorandum of accidental deaths by drowning in the three taluqs during 1862-63 tells a fearful tale.

Rajampet taluq.	
Sidhout. .. ,,	
Budvail..... ,,	
Total No.....	

24. *Assistance from Revenue authorities.*—It is gratifying to me to have to report that the Tahsildars of Rajampet, Sidhout, and Budvail have rendered me every assistance in the execution of my duties. They have cheerfully responded to all my calls on their attention, and in not a single instance evinced any of that jealousy which the department in general had always to complain about.

25. *Establishment.*—Upon the whole, the health of the establishment may be said to have been good during the past year. Though often attacked with fever, it was not of so severe a type as to oblige the men to abandon their posts. One peon I have, however, lost by death brought on by inflammation of the lungs. Were the malaria incident to most jungles the only thing to contend against, we should not have much to fear, but the district is chiefly sown with dry grain, and the plains after being ploughed and harrowed have rich manure spread over to render them fertilizing. The consequence is that the strong winds which blow off the hills just about that season of the year passing over these filthy and fetid fields, generate all manner of disease. Before concluding this paragraph, I would remark that the total number of peons required for the three taluqs as estimated by the Tahsildars is twenty-two. I confess that the present number, viz., ten peons is rather inadequate, yet it appears to me that the scale fixed

by the native officials is too high, and that they have completely lost sight of one point, namely, that I have my portion of the work also to perform.

26. *North Arcot.*—The forests in this district placed under my supervision are situated in the Chendergherry taluq. They form one continuous range from the Yerraguntla Cotta and Balpilli hills until they reach the sacred hills of Triputti.

These forests came under my charge with an establishment of Rupees 44 a month from August 1862. Since that date, the revenue has gradually increased, and now averages Rupees 200 a month The existing establishment would be ample for the due preservation of the forests, but what renders their task onerous are the different by-paths through which cartmen contrive to effect escape from payment of seignorage for wood taken. Another loop-hole is afforded by the circumstance of two Zemindars having jungles adjoining those belonging to Government. When cartmen crossing the Kircumbaddy pass are asked to produce their license, they invariably set up the plea that the wood was taken from the Zemindar's jungles, and that they would pay him the seignorage. To prevent this subterfuge, I have insisted upon these Zemindars levying the same rate of seignorage as that prescribed for the conservancy of the North Arcot forests; they have consented to do so, but whether they keep faith it is impossible for me to say. The last, though not least difficulty is the introduction of the "jungle conservancy fund;" this has always brought the two departments in collision, and although the Collector has settled the points of difference, yet the subordinate Revenue officers continue to throw every obstacle possible in my way. Were the Collector only to assimilate his rates of seignorage with what obtains in the Forest department, the two departments would work far more harmoniously, or as in the Cuddapah district, the entire taluq of Chendragherry might with advantage be transferred at once to the Forest department.

27. *Financial Results.*—I beg in conclusion to subjoin an abstract statement showing the financial results of both the Cuddapah and North Arcot forests; and in connection with the foregoing report, would urge on your special notice one other point, namely, that the Collector of Cuddapah would not credit the Forest department with the Revenue for June and July 1862, on the ground that the department had been under suspension, although it has been debited with the pay and allowances of myself and establishment. I beg to add that in North Arcot, the revenue is only from September 1862.

CUDDAPAH DISTRICT.

Receipts

Seignorage on timber, firewood, and bamboos	Rs.	10,372	15 4
Do. on accepted sleepers	„	348	3 0
Value of timber in store.	„	400	0 0
	Rupees	11,121	2 4

Disbursements

Deduct on account of fixed establishment.	Rs.	2,813	1 10
Working charges.	„	648	4 7
		3,461	6 5
In favor of Government, Rupees		7,659	11 11

NORTH ARCOT.

Receipts:

Seignorage on timber, firewood, and bamboos		1,373	6 2

Disbursements:	RS.	A.	P.
Deduct on account of fixed establishment.	332	0	0
In favor of Government, Rupees.	1,041	6	9
Cuddapah ... ... Rupees	7,659	11	11
North Arcot ... ... Rupees	1,041	6	9
Total Rupees.	8,701	2	8

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) THOMAS SPRING,

Sub-Assistant Conservator of Forests.

APPENDIX O.

CAMP AYALOOR, 12*th May* 1863

From MR. J. J. LENNON,

Sub-Assistant Conservator of Forests,

Kurnool District,

To CAPTAIN R. H. BEDDOME,

Officiating Conservator of Forests.

SIR,

I have the honor to forward my annual report, shewing the forest operations of the Kurnool district during the official year 1862-63.

Early in September I entered the district and placed myself in communication with the then Acting Collector, requesting instructions further than those given me by you.

On the 1st October the establishment of one duffadar and 10 peons being organized in accordance to G. O. No. 1538, dated 16th July, I made myself acquainted with the different places and outlets which are very numerous, and stationed 5 of the latter on the western and 3 on the eastern side of the Nulla Mallais. The principal places where much felling is carried on in the western side are. Mussilmuddoo, Seddapoorum, Yellagode, Eranapadoo, Buswapoorum and Obaluru; on the eastern, Allotla and along the banks of the Kistna, Nallagoontla, Bolapully, Pulelcherroo and Oowulwadda. The largest timber brought out of the Nulla Mallais are those coming from Seddapoorum averaging 22° × 1′ × 1′. In the former place timber (of the reserved kinds) is procurable approaching the hills and easy of access by carts; in the latter far in the interior of the hills, and brought out with great difficulty and cost, the practice adopted being two or more pair of buffaloes or bullocks are yoked to each log and the timber is dragged along the ground—The principal timber cut on these hills being Nulla Maddi (*Terminalia tomentosa*) Yeggi (*Pterocarpus marsupium*) and Chiriman (*Conocarpus latifolius*) the first being cut for beams and posts, Chiriman for joists, and Yeggi for the making of wheels (spokes and felloes in all cases being worked up in the jungle.) Though this timber is easily procured it is never used for dwelling houses, some superstition hanging about it in this and adjacent districts. In no one case have applications been received for Yerra Maddi (*Terminalia Arjuna*) Goomer Tek (*Gmelina arborea*) and Tunki (*Diospyros melanoxylon*), only one license being granted for Jitgee (*Dalbergia latifolia.*) "Jungle wood" is now invariably made to answer for joists; Chiriman and Nalla Maddi were cut for this purpose before the tree attained 5 inches in diameter prior to the conservancy rules enforced in this district, and hence it is difficult to procure trees of any size without ascending the slopes of these hills particularly on the western

side. Numerous saplings have escaped the wood cutters' axes this season, and judging from the number of licenses granted last year for "duntas" or joists by the Tahsildars and other officers, I fall short in stating that 27,000 young trees principally of Nalla Maddi have been cut last year, this number should have increased had not the conservancy been enforced in this district this season. The demand for bamboos is small considering the large tract of country (greater part of Bellary and Kurnool) that is supplied from the Nalla Mallais; the only cause I can attribute this to is the free supply of bamboos to the ryots for building purposes and fencing.

Large supplies of charcoal are daily being burnt both at the Nalla Mallais and Yerra Mallais to meet the demands of the Madras Irrigation and Canal Company, as also the market of Kurnool and smelting forges along the sides of the former in the Sirwell and Cumbum taluq. There are 73 forges requiring to be supplied at least eight months in the year, each forge requiring on an average one bandy load of charcoal each day, and the quantity of wood cut for these forges is something enormous, which is at once seen on viewing the jungles adjacent to the villages possessing these forges. On the slopes and at the foot of the hills no timber is to be seen fit for house-building, and the young trees are cut down every year to meet the demand for charcoal. On my entering the district I visited the Yerra Mallais, which lie south-west of Kurnool and midway between that place and Nundial, and observed the indiscriminate cutting of trees for charcoal, and stationed a peon on these hills to prevent the cutting of Teak and other valuable woods which were felled for this purpose. Though the Teak is stunted on these hills, as also the Satinwood, they could be made to answer other purposes than burning for charcoal, and yield a revenue in the course of a few years—ryots will only be too glad to use this Teak, &c., for the building of their carts, as is the case in the western jungles. In December the Collector notified in the District Gazette to the tahsildars to guard these as also other jungles, and to grant licenses for timber carried out of them, and limiting my operation to the Nalla Mallais only; I withdrew the peon stationed on these hills and placed him on the Nalla Mallais. The amount recovered as income from the Yerra Mallais is carried to the local fund in the Collector's accounts.

Several applications were made for green firewood for the burning of kilns in the district, as also for furnaces in the manufacture of sugar. No provision being made for this, parties resorted to felling the timber and leaving it lie in the jungles for a short time and then cart it out as the tops and branches of trees for which seignorage has been paid. If a small tax on such wood required for kilns and furnaces were levied, it would tend to prevent fraud.

Timber for agricultural purposes being granted free, numerous demands are being made by ryots, each ryot applying for one bandy load of timber for each pair of oxen in his possession; some data should be laid down for guidance to the Tahsildars granting licenses for the above timber.

The several confiscations that have been made and sold during the year being principally of young trees, and timber carted as firewood—three instances where the Collector authorized the imposition of a double rate of seignorage for timber cut without a license. The number of bandy loads confiscated and unsold at the closing of the year being twenty-five.

* Teak	21
Reserved	4,175
Jungle wood	3,325
Bamboos	2,410
	9,931
† Head loads	481
Bullock loads	267
	748
‡ By license	17,086 4 0
By auction	201 7 6
	17,287 11 6

The accounts and income for these forests run as follows:—2,293 licenses for 9,931* bandy loads of timber and bamboos, and 37 tickets for 748 † head and bullock loads have been issued from this office, realizing a total of Rupees 17,287-11-6 ‡, including amount of auction sales of confiscation Rupees 201-7-6, value of timber under confiscation and unsold Rupees 300; the amount of expenditure for fixed establishment since August 14th to April 30th being Rupees, 1749-7-10, leaving a net profit, Rupees 15,538-3-8 with value of timber on hand Rupees 300.

(Signed) J. J. LENNON,
Sub-Assistant Conservator of Forests.

APPENDIX P.

Administration Report of the Nelambur Teak Plantations.

These splendid young Teak plantations instead of a report are well worthy of an essay, but I leave that for abler pens than mine. They cover an area of upwards of 1,400 acres in all the intermediate stages of growth from one to nineteen years old, and from one to eighty feet in height. A few of the very finest specimens have attained the very handsome size of thirty cubic feet. These are exceptions, that have got plenty of light and air, completely starving and absorbing their own and neighbour's share of nutriment, thereby developing themselves in an incredibly short space of time into first class timber. The plantations no doubt have labored under the disadvantage of a proper system of pruning and thinning not having been adopted at an earlier stage of their growth, so as to allow a free circulation of air and a sufficient supply of nourishment to each tree, but under present treatment it is to be hoped they will soon recover.

It greatly enhances the value of these plantations being situate on the banks of the Nelambur river, where there is every facility for transporting the timber to the sea coast at Calicut, where it ought to command a ready market and a high price, as when at Calicut, it can be easily transported elsewhere either by Sea or Railway, and when the timber comes to maturity, it will be of the finest description for Ship building; for that purpose beams and planks will be got any length. It will prove a most valuable speculation to Government fifty years hence, and if planting is carried on, it will be an inexhaustible store. I enclose a valuation of the plantations as they now stand, which will give an idea of what may be expected in future.

The receipts for 1862-63 by sales of timber, &c., according to statement subjoined, amount to Rs. 17,721-10-8 and expenditure to Rs. 6,740-0-9.

The sales for timber (except bamboos and a few jungle trees given out on seignorage) were for saplings and timber cut last year, but not sold in time to be entered in last year's account. The saplings and timber cut this year are not sold, and will be brought forward in next year's account in like manner.

RECEIPTS IN 1862-63.

	Rs.	A.	P.
158 Teak trees sold by auction at Calicut, ...	4,130	0	0
120 Kurra Marda trees, do. do.	410	0	0
51,050 Teak saplings, do. do.	12,043	0	0
Timber sold from ground cleared for planting, ...	80	0	0
Total receipt from timber on hand in 1861-62 and sold 1862-63, Rs....	16,663	0	0
8,800 bamboos on seignorage at 2 Rs. per 100, ...	176	0	0
20 Blackwood trees do. at 10 „ per tree, ...	200	0	0
50 Kolerman do. do. at 3½ „ per do.	175	0	0
100 Benteak do. do. at 5 „ per do.	500	0	0
Rent for compound at Manglasherry, ...	8	14	10
Received for seignorage during the year ... ... Rs....	1,059	14	10
Grand total receipts during the year ... ... „ ...	17,721	10	8
ESTIMATED VALUE OF TIMBER, &C. ON HAND.			
60,000 Teak saplings ... ...Valuc...	30,000	0	0
180 Teak and Blackwood trees	2,500	0	0
Other timber cut in clearing for planting	500	0	0
Value of timber on hand,... ... ...Total Rs....	33,000	0	0

On my assuming charge on the 1st December 1862, the establishment were employed in weeding the plantations of jungle. The work was continued for a time, but had to be given up (leaving a considerable portion to cut as opportunities offer.) The season had arrived for felling the jungle for fresh planting. Thinning operations in their proper season and burning jungle already felled to clear the ground for planting, of which about 100 acres are prepared and ready to plant as soon as the monsoon sets in.

Considerable expense has been incurred in clearing this season; the site selected being heavy dense jungle gave extra labor. It is excellent soil, and will amply repay the outlay in future returns with an abundant crop of timber as well as a saving in future weeding. The better the soil, the less the weeding required. The timber felled should refund the expense of clearing and planting this season.

The hot weather is the unhealthy season here—fever has been very virulent—the establishment has suffered much from fever constantly—some of the peons have been laid up for three months and are unlikely to again resume duty.

Labor is not easily procured from various causes. Forest work not being general in the district, coolies prefer work to which they are more accustomed. The difficulty of getting supplies is greatly complained of. No market within six miles where rice can be got, and even at that distance can only be had once a week. However, the Collector has proposed to encourage bazaarmen to open shops at Nelambur, which would be a great boon to the place as well as to coffee drivers and other travellers passing up and down the Carcoor ghat. The opening of the ghat drains a great amount of labor from the district, and I suspect caste prejudice is the great barrier, this being the stronghold of Nairism. The duffadars and peons are all Nairs and prefer their own caste to any other.

Of the jungle forests in the vicinity of Nelambur some are pretty extensive, and contain a considerable quantity of jungle timber which has hitherto been given out on seignorage; being stopped, in the meantime I need say nothing on that head, as the Forest department has proposed to cut and bring all jungle timber into the market themselves. There will be some difficulty experienced in getting elephants to drag the timber to the river bank for floating. The elephants are all in the hands of Moplah timber merchants, who are busy getting their own timber into the market when the river is in flood. The Rajah of Nelambur has a great many elephants, but will not give them out on hire. There are very few natural Teak and Blackwood in the jungle forests now fit for cutting, there are a few in the young plantation fit for cutting.

Of course, I have had difficulties to contend with, arriving new in the country and with strange people about me; but I think I am mastering the difficulties, and I hope and believe that the progress of my work will be really found to have been satisfactory.

I must also say that the late and the present Collectors have given me great assistance, and that I hope the forest will continue to improve.

Besides the disbursement shewn in the accompanying account current, an expenditure of about 100 Rupees has to my knowledge been incurred in the Collector's office, of which I have not the particulars.

(Signed) J. FERGUSON,
Sub-Assistant Conservator of Forests.

NELAMBUR, 2*nd May* 1863

APPENDIX Q.

No. 84.

CAMP MANGALORE, 8*th May* 1863.

From MR E. THOMPSON,
Overseer of Forests, South Canara,

To CAPTAIN R. H. BEDDOME,
Officiating Conservator of Forests, Madras

SIR,

I beg to forward my annual accounts duly countersigned by the Collector.

Our total receipts for the year are Rupees 6,559-8-1. This showed a decrease over last year of Rupees 2,034-14-11. This decrease is owing to the Collector having put off the sale of contract for working Sandal oil stills to the beginning of the year instead of selling them at the latter end of the year as formerly.

Though our receipts appear less this year, it really is not so, as the following table shows.

Table showing the receipts of the Forest Revenue during 1861-62 *and* 1862-63.

1861-62.				1862-63.			
	Rs	A	P.		Rs.	A.	P.
Seignorage.....	4,056	1	2	Seignorage...	5,767	3	11
Sale of confiscated timber and forest products.....	627	1	5	Sale of confiscated timber and forest products.....	792	4	3
Licenses for working Sandal oil stills.....	3,911	4	5	Licenses for working Sandal oil stills.....	0	0	0
Total Rs...	8,591	7	0	Total Rs..	6,55[illegible]	8	1

Our collections this year over last amount to Rupees 1,876-5-6, and we have timber cut in Sooliah jungles to the value of Rupees 5,224. This timber could have been taken out and sold if I could have got elephants; but they were not procurable at any price, as there are but few in the district, and the merchants had full work for them of their own.

During the year we girdled 1,000 trees of Black and Habalso wood in the Soobramoney jungles, and dug 50,000 pits and planted 6,000 plants of Teak and Blackwood in Sooliah.

I have formed nursery beds of Teak and Blackwood seed. Blackwood germinates easily; we have no trouble with it; but we find a great difficulty in getting plants from Teak seed. I have set a quantity of seed in April, and I have more to set this month. I am trying a certain quantity in different ways, in fact in every way that I have heard of, and in different kinds of soil, the result of which will be known hereafter and shall be duly noted.

Our pruning account is not much (18,500 trees of Teak and Blackwood) owing to the want of proper supervision. I had but very little time to visit the place myself, and I did not like to trust peons too, for as I consider it better to leave work undone than to pay too much for it or have it done carelessly.

Out of the 6,000 plants set in the beginning of the year we lost 400 plants, but the remainder are doing well, and as we have had showers already there is not much fear of us losing any more.

(Signed) E. THOMPSON,
Overseer of Forest, South Canara

APPENDIX R.
No. 82.

OVERSEER'S OFFICE,
CAMP PAREACOLLAM, *5th May* 1863.

From MR E. SPERCHNEIDER,
Forest Overseer, Madura,
To CAPTAIN R. H. BEDDOME,
Officiating Conservator of Forests.

SIR,

I have the honor to submit my third annual Administration Report of the Madura Forests for the official year 1862-63.

2. *Financial Results.*—The revenue of the year amounts to Rupees 4,949-12-5 derived from licenses. There have been no licenses granted in the Kumbum valley, as those forests are worked by the department. The revenue from this source has therefore fallen off; the cost of establishment including my salary amounts to Rupees 2,356-0-8 out of 5,000 Rupees, the sanctioned amount 4,306 Rupees has been drawn, the sum of Rupees 246-4-2 has been expended in forming depôt, house, and planting Acacias, and Rupees 2,341-6-0 has been worked to satisfaction for felling and carting timber into depôt, and the remainder 1,724-3-10 is the balance outstanding on the contractors. Three bandy loads of timber have been confiscated during the year which may be valued at 30 rupees. I beg to observe in explanation of what may otherwise be deemed a falling off in the forest revenue (I mean in proportion to the last year's increase over that of the year preceding) that it is necessary in order to attain the exact financial results of the forests to add to the sum derived from licenses the value of the timber felled and squared

during the year and now lying in the Tavalams, as well as of that which has been carted and placed in the depôt at Kumbum and still remains unsold. If the timber lying at the Tavalam be valued at the low rate of 12 Annas per cubic foot and that lying at the depôt at 1 Rupee, then we have Rupees 4,421. This gives a total in favor of the forests of Rupees 9,310-12-5. Thus it will be seen the revenue of the year under review exceeds that of the previous one by Rupees 717-7-0 as shown in the margin.

4,919	12	5	Realized from tickets.
4,421	0	0	Probable profit of timber lying in the depôt at the Tavalams.
9,340	12	5	
1,027	14	0	Add profit to Hospital timber.
10,368	10	5	Grand total of receipts.
5,278	11	7	Deduct establishment and all working expenses of above.
5,089	14	10	Net profit of 1862-63.
4,372	7	10	Deduct net profit of 1861-62.
717	7	0	Increase over the past year.

3. *Timber supplied to the Lying-in-Hospital.*—I beg to remark, further, my department was engaged in the early part of the year in felling timber for the Lying-in-Hospital at Madura in compliance to the order of Government, dated 18th December 1861, No. 1666. In my opinion, it would have been fairer to have purchased the timber at market price from the forest instead of which the Forest department supplied nearly all the requisite timber to the Medical department at cost price, the profit of which would have amounted to Rupees 1,027-14-0 in favor of the forests. The timber supplied consisted chiefly of Venge (*Pterocarpus marsupium*) and Teak logs of various dimensions.

4. *Why more timber was not felled.*—The sanction of Government authorizing the amount of 5,000 Rupees for working the forests did not come to hand sufficiently early to commence operations. The south west monsoon commenced in the early part of May when no work was carried on. I was therefore obliged to wait till the south west monsoon ceased, when the timber for the Lying-in-Hospital was cut; this occupied my time till the beginning of August. I was able to fell and cart timbers into the depôt till the end of September only, when the north west monsoon began, which lasted for nearly four months. I do not recollect experiencing such extraordinarily heavy rains as we had last year; this accounts partly for the failure in the operations. In January and February my axemen deserted the forests for the purpose of smuggling cardamoms from the Travancore territories, for which their lawless masters gave them as much as 2 Rupees per diem, whereas they received only 8 Annas from me for felling timber. Besides these obstacles I beg to report that not less than 7 axemen were killed by tigers while felling timber in the course of the year under review—report has reached me that 8 more persons were carried away by tigers in the month of April. These animals are now very plentiful in the Kumbum valley, and I have informed the Collector of these accidents and begged him to offer rewards for the destruction of these animals.

5. *Resources of the Madura forests.*—I beg to submit the following list, showing the resources of the forests and their conditions.

Taluq.	Village.	Resources.	By whom claimed.
Peryakollam....	Perujakollam.	Venge, Teak, stunted..... ..... Vekaly, much cut up, not easily to be got at.....	Government property.
do.	Devadanapatty....	Venge, stunted Teak.....	
	Gangoovaspatty...	Vekaly, Kungilum Vagay, very plentiful not easily worked.	do.
do.	Kumbum..... ...	Venge, Teak Vekaly.....	do.
	Gudalin.....	Anjeli and other jungle wood, very plentiful and easily worked.	Worked by Government.
do.	Warsanad.....	Venge, Teak, Agil, Vekaly, very plentiful and very feverish.	Belonging to the Vellanadi Zemindar.
do.	Bodinayakanin....	Venge and Vekaly—not easily to be got at.	Belonging to the Bodinayakanur Zemindar.
Palin.....	Aryambulli...	Venge, Vekaly, Kungilum, plentiful, not easily to be got at.	Government.
do.	Verupathi,...	Bamboos very plentiful,.....	Government.
Melin.....	Naltan.....	Vekaly, Venge, and other jungle wood,—no demand and very feverish.	do.

6. *Work pursued.*—The system of licenses, I am glad to report, is working admirably well in the district; it is the principal source of revenue, yet great care is exercised in working the forests. My peons serve as watchmen not merely in restraining theft but also in entering the forests where timber is being felled under license and exercising their supervision and care to the growing trees. The establishment is now too limited to embrace this twofold duty which devolves upon it, the extent of country to be conserved is great, in fact is out of proportion to the number of peons who are placed under me for its protection. The working of the Kumbum forests is steadily progressing, but not to the extent I originally anticipated; however from the last year's experimental working I am confident that more work could be effected under more favorable circumstances, and should the present market value of timber be raised (as the seignorage on timber will shortly be increased, the value of course will rise in proportion), the working system will be a perfect system.

7. *Bandy contractors.*—From the Tavalams the timber is carted into the village where the depôt is by bandy contractors who receive from one Rupee to one and half Rupees per bandy load as the distance might be. I am glad to report that the contract system in this respect works well. To have our own carts and bullocks would be expensive in the long run, for in the carting season February, March, and April, oxen are generally troubled with sore mouths and feet, and would do little or no work. Besides they are very scarce and have to be brought from the Salem District.

8. *Punakad cultivation.*—In the course of my frequent tours through the district, I made it a point to suppress that rude system of cultivation known in other parts of the country as Kumri. The practice is now entirely disallowed, and it gives much satisfaction to find that Kumri will eventually cease in this district. Every application for Punakad is referred to me by the revenue officers, and after personal inspection of the spot I return the application endorsing my opinion on it, but no forest is given away where there is much valuable timber and the conservancy of which is financially profitable; only such parts that have been subject to Kumri cultivation within seven or ten years. The few Punakad cultivations that occurred in the unfrequented valleys and on the slopes of the hills of Kumbum in the course of last year would not have taken place if the revenue authorities had enforced the rule that no forest is to be cleared or cultivated previous to submitting an application for the same and the land inspected.

9. *Boundaries between Government and Zemindary Forests.*—This I am sorry to report is still unsettled, the disputed parts are on the north face of the Pulnies, Rettay, Amboody, Ayakudy, Chatrapatty and Kaminaddy, south face of the Pulnies, Aiyampolium, in the Kumbum valley Velleynadi. If the boundaries of these tracts are well defined, all clandestine felling of timber will be stopped and guarded. To remedy this, new boundary stones should be laid down. In some Zemindary tracts, the old boundary stones have been removed from the places originally located by the survey party, and thus they have acquired new tracts of forests, others again are actually obstructing timber from being taken through their forests.

10. *Acacia Plantation.*—I beg to report that the Acacias which were planted in the gaps of the Shola and other vacant places are improving rapidly; it will soon be necessary to plant a few acres with quick growing Acacia, to supply the enormous demand for firewood which is daily on the increase. The European settlement of Kodakanal is now much frequented by visitors from Trichinopoly and Tinnevelly, and the quantity of fuel consumed daily is now greater than in the year previous.

11. *Pulathoor Sandalwood jungles.*—I thrice visited these jungles in the course of the year, and have much satisfaction in reporting that the young plants have now numerically increased as well as the older trees have been protected from smugglers and creepers. The villagers have been strictly warned from engaging in any taxation whatever in supplying the wood to the natives of the low country.

12. *Concluding Remarks.*—In reviewing the forest operations and their results of the year, it is of importance to bear in mind that though the revenue has not increased to the extent I anticipated, destruction of forests and clandestine felling of timber have been arrested. I am well satisfied with the exertions of my subordinates for the past year, with the exception of one who has been dismissed from the department for incapacity; many of my subordinates have had very arduous duties to perform, the duty is not the collection of seignorage alone but conserving the forests—sickness also has prevailed amongst them especially in the Kumbum valley, where it is generally feverish. My writer, whose appointment was lately sanctioned has rendered much satisfaction in carrying on the duties connected with

my office. The three peons sanctioned by Government in lieu of the Tamil goomastah, whose post has been abolished, have been stationed in the Kumbum valley and Pulni. I trust their presence in some of the mountain passes will be able to check any clandestine felling of timber that may come to their notice.

(Signed) C. SPERSCHNEIDER,
Forest Overseer.

APPENDIX S.

Memorandum of operations in the Annamallay Forest during the official year 1862-63.

From the 1st May until 1st November, the range was in charge of Captain Brine, Captain Michael having relieved him at Coimbatore on the later date.

The forest working season was then drawing to a close, a few planks only which had been cut remaining to be measured; 2,629 planks and heads were cut altogether. A contract for cutting 100 logs of Vengay was given out by Captain Brine; but the contractor having cut only 60 logs up to the time at which it was necessary to leave the jungles, his account was not settled, and the logs were stored in the forest, in order that he may complete his work next season.

158 Logs were cut in the early part of the year for the Trincomallee coal sheds, and of these 70 have been carted to the top of the slip. The remainder are stored in the forest for want of carriage. The Naval agent at Trincomallee has declined taking this timber—Vide letter to the address of the Officiating Conservator from this office, No. 150 of 4th December 1862.

Captain Brine's reports shew that very little carting was carried on during the early part of the year, and it had entirely closed when Captain Michael took charge. Every endeavour was made at the close of the monsoon to induce the defaulting cart contractors to resume work as well as to collect fresh contractors, but without success until the month of January when Captain Michael took up his residence at Collengode and commenced a system of prompt payment for work performed to any one who would come forward. The number of carts available has been steadily increasing, and about 90 are now at work.

Floating was not attempted until the month of November, when fortunately a late fresh came down the river and 563 planks were safely floated to Ponany.

The forest roads were repaired and extended by Captain Brine, and the repairs below the ghat between Collengode and the foot of the slip, especially near Shemmanam puddy have been attended to by Captain Michael.

The receipts from sale of timber and seignorage amount to a very small sum as follows:—

Sold to Mr. Bake in May 1862, 707 cubic feet of Teak at 1¼ Rs. per cubic feet, and 266½ cubic feet at 1 Rupee per cubic foot.....	1,150	2	7
Received in April 1862 as seignorage from the Chonut Nair forest... ...	75	0	0
Due on account of do. expected daily from the Engineer in charge.....	657	0	0
	1,882	2	7

No sales have taken place at Ponany owing to the Bombay Government declining to take any more timber; advertisements were published calling for tenders for the purchase of the 563 planks lying at Ponany and for a similar supply lying in the depot at Mungarah. No offers were made, but on making enquiries lately among the merchants at Ponany an offer was received of 45 Rupees per 100 kolls for all the planks now lying at Ponany. This is 5 Rs. less per 100 kolls than was paid for 4th class planks at the last sale to the Bombay Government.

Even were it desirable to accept so ruinous an offer, it would be impossible to sell the whole, as the batch contains a great number of Chinna Rowthen's planks which must be separated and measured.

It was intended that a sale of inferior timber should have taken place before the close of the official year either at Coimbatore or Polachy, but it was found to be impracticable to remove any from the fores owing to want of carriage, every cart that could be collected having been employed in conveying the more valuable timber to Mungarah so as to be ready for floating.

(Signed) J. MICHAEL, Captain,
Assistant Conservator of Forests.

COIMBATORE, 11*th April* 1863.

Memo. of the quantity of Timber unaccounted for in the Annamallay Forest.

				Rs.	A.	P.	Rs.	A.	P.
Value of timber unaccounted for brought from last year's account.				1,17,553	11	5			
Add timber felled during the year 1862-63				1,13,970	0	0			
			Total...				2,61,523	11	5
Deduct sold in 1862-63				952	10	0			
Do. destroyed by fire, white ants, &c				0	0	0			
							952	10	6
			Balance...				2,60,571	0	11
	PARTICULARS.								
1,153	Planks under transport to Mangarah	at 50	Rupees	57,650	0	0			
1,000	do. at Mangarah,	do.	do.	50 000	0	0			
563	do. at Ponany,	do.	do.	28,150	0	0			
213	do. between foot and Mangarah,	do.	do.	10,650	0	0			
1,300	do. lying on the ghat	do.	do.	65,000	0	0			
675	do. do. on do.	at 30	do.	20,250	0	0			
339	do. do. on do.	at 20	do.	6,780	0	0			
168	do. do. on do.	at 10	do.	1,680	0	0			
66	do. do. on do.	at 5	do.	330	0	0			
150	Logs,	at 15	do.	2,385	0	0			
250	do.	at 10	do.	2,500	0	0			
100	do. at Pooligaddy,	at 20	do.	2,000	0	0			
320	Round do. at do.	at 20	do.	6,100	0	0			
70	Square do. at the top of ghat,	at 35	do.	2,450	0	0			
88	do. do. at Perwarry,	at 35	do.	3,080	0	0			
30	Logs,	at 30	do.	900	0	0			
9	do.	at 25	do.	223	0	0			
1	do.			25	2	7			
1	do.			47	5	6			
23	Rosewood pieces,	at 3	Rupees	69	0	0			
5	Burnt and damaged logs,	at 9	do.	4	0	0			
1	do.			4	8	0			
			Total Rupees...				2,60,571	0	11

(Signed) R. H. BEDDOME, Captain,
Officiating Conservator of Forests.

OOTACAMUND, *22nd May* 1863.

APPENDIX T.

Administration Report of Neilgherry Sholas for the year 1862-63.

Financial Results.

The financial results are not very satisfactory—the charges for the year being 9,413-12-8, and the receipts 3,995-6-3, or a balance against the Sholas of Rupees 5,418 6-5. This is due to the fact of an Assistant having been specially retained for this charge and the whole of his Military back pay having been debited against the Sholas. This year no charge will be made for the officer's supervision.

Planting.

The Governor's Shola has been planted with fast growing Australian Acacias, but a good many have been destroyed by the Todas' buffaloes. Attempts were made to keep out the buffaloes, with but little success, more especially as the late Collector of Coimbatore had granted a puttah to the Todas of part of the land fitted for Government purposes. The matter has been referred to the present Collector, in order that the Todas may be compelled to erect proper boundary marks on the land for which they hold a puttah.

Firewood.

The supply of firewood to the station of Ootacamund has been abundant and cheap during the past year, a bandy load of wood of 750 lbs. being sold for Rs. 3-8-0. The distance to the Devi Shola, whence the firewood will come in future, is rather further some 11 miles on a fair road, and I am induced to believe from what the present contractors have stated that wood will still be sold in Ootacamund for Rs. 3-8-0 the load of 750 lbs. The number of acres of forest

land required for the annual supply of Ootacamund may at present be taken at 60; in a year or two it will probably rise to 80 acres, indeed the Devi Shola is the only available forest that is capable of supplying the wants of Ootacamund for years to come.

(Signed) H. R. MORGAN, Major,
In charge of Neilgherry Sholas.

CAMP MUDUMALLAI, *25th May* 1863.

APPENDIX U.

Administration Report of Wellington Australian Plantation for the year 1862-63.

Financial Results

The financial results of these firewood plantations have not been very satisfactory, the demands for poles having been very limited, and the plantations are not yet in a fit condition for the supply of firewood. The expenditure is Rupees 1,638-10-11, against receipt Rupees 2-10-8, or a balance against the plantations of Rupees 1,556-0-3.

Planting.

About 8 acres were planted last year; the trees are in good soil and have made fair progress.

State of the Plantations

The older trees in favorable soil have of late made good progress; but where the soil is indifferent, which it is in many places, the trees do not appear to progress favorably.

(Signed) H. R. MORGAN, Major,
In charge of Wellington Australian Plantation.

CAMP MUDUMALLAI,
25th May 1863.

APPENDIX V

Forests of Goomsoor and Sooradah.

These forests are very large and consist of Saulwood for the most part; they extend with a few interruptions from Kurchooly and Jugganatprasad in the east, to Sooradah on the Aska river in the west; on the north they are bounded by the Khond hill range; from north to south their breadth varies greatly owing to the nature of the soil, the encroachments of cultivators and other causes, that of Madgegudda at Russelcondah has a breadth from north to south of about 12 miles.

The forests about Sooradah, of which the four principal are Rugada, Bondogish, Gangea, and Siteparda have at one time been very fine and at some future day may still be so; but they have for a long period of time supplied large quantities of timbers to the Ship-building port of Ganjam, the Aska factory, and the several other large towns in the district, and consequently the greater part of them have been cut over, but under the present regulations they must rapidly recover.

The best timber is now procurable in the forests of Komlabah and Gulley, and which during the rains can be easily laid down at Ganjam, there being good water carriage all the way. Indeed all the principal forests of the district are situated on one or other of the confluence of the Ganjam river.

Up to the beginning of 1861, the public having had unrestricted access to these forests, the finest timber has been long since removed from all the more accessible parts, so that now the procuring of large wood is becoming much more difficult and costly than it used to be.

The introduction of the forest tax has had the effect of partially staying the destruction of the forests, but the tax on the superior kinds of timber has been found not to be heavy enough to act as a protection, so it is likely to be increased shortly. An overseer with 2 peons was appointed to the forests in 1862, and it is contemplated to increase the establishment so as to admit of cutting and planting.

PROGRESS REPORT.

In these forests I regret to say there is no progress to report. The establishment consists of two peons, and as the area over which they have to keep watch contains many hundreds of villages, each of which must occasionally be visited, all we have yet been able to accomplish was to collect the tax and see

that no one removed wood from the forests without the proper permission : the villagers are greatly addicted to evading the regulations, and require a very strict watch to be kept on them both to prevent them destroying the forests for purposes of cultivation, and to keep them from carrying off the timber to supply the demand of the sea board towns of the district.

A few glaring instances of breach of the rule have been prosecuted, but the object has been to keep such a watch that no necessity for a prosecution should arise, and when a few more peons are added to the establishment, that object will have been attained.

Advances received and unadjusted.

No advances have as yet been received in these forests for any purpose whatever.

(Signed) JOHN BROWN,
Overseer in charge.

RUSSELLCONDAH,
18*th May* 1863.

(True copy)

(Signed) G. S. FORBES,
Collector.

Year.	Receipts by sale of wood.	Disbursements including supervision, &c.	Net profit.	Remarks.
1862-63.	1,197-1-1	743-3-10	453-13-3	

(Signed) JOHN BROWN,
Overseer in charge.

RUSSELKOTAH,
18*th May* 1863.

(True copy)

(Signed) R. H. LYONS,
Deputy Collector.

Financial Results of Forest Conservancy Department for 1862-63.

Names of Forests.	Receipts by the sale of timber, &c.	Disbursements including the cost of establishment and contingencies.	Balance in favor of Government.	Excess of Expenditure over Receipts.	Estimated value of timber stored in Depôts.	Remarks.
Anamallai	75	33,839 1 10	....	33,764 1 10	2,60,571 ... 11	
Mudumallai	62,731 5 ...	44,023 11 5	18,707 9 7	....	1,21,071 15 ...	
Cuddapah	10,721 2 4	3,461 6 5	7,259 11 11	....	400	
Sigur	27,641 4 3	13,570 ... 6	14,071 3 9	....	16,240 6 5	
Nelambur	17,721 10 8	6,740 ... 9	10,981 9 11	....	33,000	
Salem	22,548 13 4	13,078 15 3	9,469 14 1	....	16,000	
South Canara	6,559 8 1	4,943 10 2	1,615 13 11	....	5,224 10 8	
Wynad	5,351 1 5	12,095 9 9	... ...	6,744 8 4	18,678 5 8	
Hunsur	98 1 ...	2,098 ... 9	....	1,999 15 9	6,454 2 9	
Kurnool	17,287 11 6	1,749 7 10	15,538 3 8	... ...	300	
Madura	4,949 12 5	4,943 10 10	6 1 7	... ...	4,421	
Neilgherry Sholas	3,995 6 3	9,413 12 8	....	5,418 6 5	....	
North Arcot	1,373 6 9	332	1,041 6 9	....	... ...	
Gumsur and Surada	1,197 1 1	743 3 10	453 13 3	....	... ...	
Australian Plantation	82 10 8	1,638 10 11	....	1,556 ... 3	... ...	
Total...	1,82,333 14 9	1,52,671 6 11	79,145 8 5	49,483 ... 7	4,82,361 9 ...	Deduct Estimated value of timber remaining in the Depôts on the 30th April 1862 minus the value of timber transferred to the Bombay Presidency from the North Canara Forest on that date, viz., Rs. 3,37,992-6-9.
Deduct General charges.					2,95,553 1 4	
Pay of the Conservator of Forest's Office Establishment, travelling and coutingent charges, &c.		23,096 14 6		Difference...	1,86,808 7 8	
Excess of Expenditure over Receipts		49,483 ... 7	72,579 15 1			
Actual profit to Government			6,565 9 4			
Add excess of timber on hand on the 30th April 1863 to that of 30th April 1862			1,86,808 7 8			
Total Rupees			1,93,374 1 ...			

No. 102. Read the following letter from the Officiating Conservator of Forests :—

Submitting his Annual Report for 1862-63 of the forests under his charge. } (Here enter 1st May 1863.)

No. 103. ORDER THEREON, 12th August 1863, No. 1,484.

1. This report details the operations of the Forest Department in the official year 1862-63.

2. The receipts and charges of the year are shown below :—

Names of Forests.	Receipts by the sale of timber, &c.	Disbursements including the cost of Establishment and contingencies.	Estimated value of timber stored in Depôts.
	Rs.	Rs.	Rs.
Annamallay	75	33,839	2,60,571
Mudumallay	62,731	44,024	1,21,072
Cuddapah	10,721	3,461	100
Scegoor	27,641	13,570	16,240
Nellambúr	17,722	6,740	33,000
Salem	22,549	13,079	16,000
South Canara	6,560	4,944	5,225
Wynád	5,351	12,096	18,678
Hoonsoor	98	2,098	6,454
Kurnool	17,288	1,749	300
Madura	4,950	4,944	4,421
Neilgherry Sholas	3,995	9,414	. ...
North Arcot	1,373	332	...
Gumsoor and Surada	1,197	743	.....
Australian Plantation	83	1,639	.. ...
Central Office	.....	23,096	.....
	1,82,334	1,75,768	4,82,361

3. The net revenue was only Rupees 6,566, but the value of timber cut and in store, at the end of the year amounted to Rupees 4,82,361. This result is mainly owing to the absence of sales in the Annamallay Forest, owing to the extinction of the Indian Navy and the consequent cessation of purchases by the Bombay Government.

4. It must also be remembered that just before the commencement of the year under report the most valuable and remunerative forest tract, North Canara, was transferred to the Bombay Presidency.

Year.	Receipts.	Charges.	Net Revenue.
1860-61	99,300	90,323	8,977
1861-62	1,70,204	1,39,277	30,927
1862-63	1,82,334	1,75,768	6,566

5. The receipts and charges of the last three years, excluding North Canara, are given in the margin. But for the stoppage of sales in the Annamallays and Wynád the net revenue of 1862-63 would have been considerably higher than that of the two preceding years.

6. In the course of the year the Acting Conservator visited all the forests excepting those of South Canara and Goomsoor. These, the Government hope, he will be able to visit at an early date, especially the latter where the valuable tracts of Sâl require attention.

7. *Cuddapah and North Arcot.*—The Government are glad to learn that the Establishment in these Districts has been brought again into good working order by Mr. Spring's exertions, and that clandestine felling has been greatly checked. The forests are worked on the licensing system, being too scattered for the Department profitably to fell the timber. The rules under which this system is carried on are stringent and leave little room for malpractices. The Sub-Assistant complains and apparently with some reason of the insufficient number of Peons

attached to his Establishment. Captain Beddome should consult the Collector on the subject, if he is not already personally cognizant of the real requirements of the District.

8. The propriety of opening a cart road to the "Chellalkona" Forest should be enquired into.

9. The illicit practices mentioned in paragraph 8 of the Sub-Assistant's report should be vigorously repressed, which there can be little difficulty in doing, if they are as prevalent as reported, for large quantities of timber are not easily concealed. The Collector's attention will be drawn to the subject in order that he may instruct his village officers to co-operate with the Forest Department.

10. In paragraph 18 the Sub-Assistant touches on the Ryots' claim to firewood, &c. The Government have on former occasions explained the nature and extent of the privileges conceded to the villagers, and these must be respected. No doubt they leave an opening for abuse but the Forest Department must exercise the greater vigilance. The Collector will be requested to report on the statements contained in paragraph 19 of Mr. Spring's letter.

11. The Government wish to know some thing more of Chinna Chellama Reddy's garden.

12. Mr. Spring's report is creditable to him, but it contains much irrelevant matter. A Forest report is not the place for such subject as those mentioned in paragraphs 22 and 23, and simplicity of expression is particularly to be desired.

13. The Collector of North Arcot will be requested to report through the Revenue Board on the seigniorage rates of his District, and the expediency of assimilating them to those of the Forest Department. He will also be instructed to urge on the Zamindars of his District the great advantage of conserving their forests. It should be considered whether, if the Zamindars are willing, it would be desirable to rent the two Zamindary forests referred to by Mr. Spring in order to facilitate the conservancy of the Government forests. The Government have no power to compel Zamindars to adopt their rules and rates of seigniorage as Mr. Spring seems to suppose, and the co-operation of private proprietors in the great object of preserving timber must be obtained by convincing them of the advantages of such a policy, and not by a vain show of compulsion.

14. *Kurnool.*—The results of the conservancy in the Kurnool District are very satisfactory. Notwithstanding the entire stoppage of felling of Teak and Sanders-wood and of all immature trees, the receipts have more than doubled. The Canals of the Irrigation Company will add considerably to the demand for timber as its conveyance to other markets will be greatly cheapened; conservancy should therefore be strictly enforced. The Conservator should notice the remarks of the Sub-Assistant on the demand for charcoal and "green firewood."

15. *Salem and South Arcot.*—The forests in this District have been much impoverished by the demand in past years for Railway sleepers. The results of the year are satisfactory. The Conservator has been required to report whether the Pennagara Forests will repay the expense estimated at 60,000 Rupees of a good cart road. The destructive practice of notching Sandal-wood trees, mentioned in paragraph 2 of Captain Borrodaile's report, should be stopped effectually.

16. The result of affording the people increased facilities for procuring licenses has been very marked in Salem, and the experience thus gained should be applied in other Districts.

17. The pay of the Peons in this range seems too low.

18. *Mudumallay and Seegoor.*—The Mudumallay and Seegoor Forests both under Major Morgan have been worked very profitably. The Government wish to be informed in next year's report how the experimental Sandal-wood plantation has answered.

19. *Annamallays.*—The Government will recall the attention of the Home Government to the offer of Annamallay Teak to the Admiralty. The Conservator acted rightly in not pressing sales.

20. *Wynád.*—The small revenue derived from the Wynád Forests is sufficiently explained. The Government are glad to learn that Coomery has been so effectually checked.

21. The Collector has since reported that the Trustees of the Palpally Temple decline to rent their forests to Government. He will watch the claims of the Trustees and have the boundaries carefully and permanently marked without delay. The Conservator will report on Captain Gib's proposal to give his subordinates a share of the fines imposed on those who infringe the rules regarding Tukkul.

Board's Proceedings dated 1st August 1863, No. 4,838.

22. The Government do not doubt that much benefit will result from the recent arrangement whereby Captain Gib has been relieved of his duties in Mysore and enabled to devote his whole time to the Wynád and Hoonsoor Forests.

23. *South Canara.*—The increased Establishment in South Canara will lead to a larger revenue and more successful conservancy. The Government observe that 1,000 trees were "*girdled*" during the year, they were under the impression that this practice had been discontinued as injurious to the timber. The progress of the Black-wood plantations should be specially noticed in the next report.

24. *Madura.*—The attention of the Collector will be drawn to the importance of having the limits of the Zemindary forests clearly defined and marked out.

25. The Conservator will communicate with the Collectors of Madura and Tinnevelly on the subject of leasing the Zemindary forests and bring the forests in the latter District under regular Conservancy.

26. The planting of Australian Acacias on the Pulneys should be proceeded with.

27. *Nellambúr.*—The Government are glad to learn that these plantations are thriving so well under Mr. Ferguson's care. A million and a half of trees have been planted and are valued at Rupees 20,59,117. The tools applied for have lately been received and great attention should now be paid to thinning and pruning. The plantation now yields a handsome profit from the sale of Teak saplings and other timber; and the planting of fresh tracts should be systematically carried on.

28. *Neilgherry Sholas.*—The expenses of conservancy have now been much reduced, and it may be expected that in future they will at least be covered by the receipts. The great object, however, is to preserve the forests which would rapidly be destroyed if conservancy were withdrawn.

29. The Collector's attention will be drawn to the injury said to be caused by the Todas' Buffaloes to the Nurseries in the Governor's Shola. The portions within which the Todas have rights of pasturage should be defined and fenced in, or their rights should be purchased at a fair price.

30. The rapid growth of the Australian Acacias will in a few years ensure an ample stock of firewood, and when the price of the article is really remunerative there can be little doubt but that private individuals will engage in planting for the supply of the local market. When the present contract expires, it will be for consideration whether the present system of tying down the Contractor to a maximum price should be continued, or whether it would not be better to sell the forests in which firewood may be cut in moderate lots without any restriction as to price, trusting to this being kept within reasonable limits by competition. The present system is evidently repressive of private enterprize, for no one will invest capital in planting if the market price is arbitrarily fixed by the Government, and it in effect amounts to the supply of firewood by Government at a lower price than it is really worth. The Government should of course carefully preserve the remaining forests and make them available to the public so far as is consistent with due regard to future wants, but it is not their business to grow firewood, for the people, any more than grain or other commodities, and their operations should be so conducted as to encourage and not repress private enterprize.

31. The Australian plantations near Wellington under present arrangements, will, the Government trust, prove more successful. Care should be taken to plant only in favorable soils.

32. *Goomsoor.*—The Establishment for the Goomsoor Forests has lately been increased. The Government, however, wish the Conservator to visit the Ganjam District as soon as the season permits and report on its forests and the most effective mode of managing them.

33. *Village Topes.*—The attention of the Board of Revenue will be drawn to the Conservator's remarks on village Topes. The encouragement given to planting is great. Topes planted for public utility and convenience are free of all tax, either on the land or on the trees, and the planter may cultivate the land, free of tax, until the trees become productive. Persons wishing to plant topes for private benefit as well as firewood plantations are allowed waste land free of assessment for twenty years and after that period are charged the ordinary land assessment.

34. The Government do not doubt that the recent formation of a grade of Sub-Assistant Conservator will have a very beneficial effect on the subordinates of the Department.

35. In permitting Ryots within their own village limits to cut the unreserved timbers for agricultural purposes, to cut firewood for their own use, and to gather decayed leaves for manure, without charge, the Government merely respect a long established usage. Every valuable tree is reserved, so that the concession is really not so great as it appears, and the Government are not disposed to stop the privilege long given to the Ryots because in some cases it is abused.

36. The Conservator's further report on the expediency of introducing sawing machinery worked by water power is now under the consideration of Government.

37. The Chinchona plantations will be separately noticed when the Superintendent's report is received.

38. The Government hope soon to receive a report from the Collector on the Tea plantations of Captain Mann and Mr. Rae and the effect of skilled manipulation. The statement that the plant thrives best on grass land is important.

39. A copy of this report will be forwarded to the Home Government as usual.

(True Extract.)

(Signed) C. G. MASTER,
Deputy Secretary to Government.

To the Board of Revenue.
" Conservator of Forests.
" Collector of Cuddapah.
" Do. North Arcot.
" Do. Malabar.
" Do. Madura.
" Do. Tinnevelly.
" Do. Coimbatore.
" Superintendent Government Chinchona Plantations.

Exd. S. T. Augustin.

REPORT

OF THE

CONSERVATOR OF FORESTS,

FOR THE

OFFICIAL YEAR

1863-64.

MADRAS:
PRINTED AT THE UNITED SCOTTISH PRESS, BY GRAVES, COOKSON AND CO.
1864.

APPENDIX.

A. Report upon the South Canara Forests.

B. Report upon Gumsur and Surada Forests.

C. List of new and rare plants drawn in the Office of Conservator of Forests.

D. Description of "Calophyllum elatum" (Bedd.) with plate.

E Do. "Hopea parviflora" (Bedd.) with plate.

F. Anamallay Forest Report.

G. Wynad Forest Report.

H. Hunsur Forest Report.

I. Mudumallay Forest Report.

K. Seegur Forest Report.

L. Neilgherry Sholas Forest Report.

M. Australian Plantation Forest Report.

N. Bowani and Collegal Forest Report.

O. Salem and South Arcot Forest Report.

P. Nellambur Teak Forest Report.

Q. South Canara Forest Report.

R. Cuddapah and North Arcot Forest Report.

S. Kurnool Forest Report.

T. Madura Forest Report.

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ERRATA.

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1	4	4	225.	*read* 255
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OFFICE OF CONSERVATOR OF FORESTS,
CAMP, OOTACAMUND, *1st May* 1864.

From CAPTAIN R. H. BEDDOME,

Officiating Conservator of Forests.

To J. D. SIM, Esq.,

Secretary to Government, Revenue Department,

Fort Saint George.

SIR,

1. I have the honor to forward my Annual Report for 1863-64 of the forests under my charge.

2. In June I visited the Teak plantations at Nellumbúr and the forests in that District. In July the Bolumputty forests and the Anamallays. In August I went a tour through the Sandalwood forests of Tallay Mallay, Hussanoor, Collegal, and Seegoor. In September I visited the Salem forests, and the forests of Cuddapah and North Arcot. In October I visited the establishment in Wynad, and in November I went a tour through the forests of South Canara, and in January and February I completely explored the Sál forests of Gumsúr in the Ganjam District.

3. CUDDAPAH.—Mr. Spring, the Sub-Assistant Conservator in charge of these forests, was removed to the temporary charge of the Anamallays on the 1st of July 1863, and Mr. Yarde, Overseer in the Salem district, was nominated to act as Sub-Assistant Conservator, and took charge of these forests on that date.

4. *Increase to the Establishment.*—Government in their Proceedings No. 1,962, dated 30th of April last, sanctioned an increase to the establishment of one Duffadar on Rupees 15, and five Peons on Rupees 6 each per mensem; this increase was much needed, by it the cost of the establishment was raised from Rupees 225 to Rupees 300 per mensem.

5. *Depôt.*—A second depôt for the supply of timber to Government Departments and to the Railway has been opened at Codoor.

6. *Clandestine felling on the decrease.*—The Sub-Assistant Conservator reports that clandestine felling is much on the decrease, the sales of confiscated timber only amount to Rupees 149-8-0, against Rupees 1,600 realized during the last official year.

7. The "Diospyros ebenum" (called by the Natives Nallootee) a tree yielding one of the best Ebonies of commerce, has been found in this district, and has been entered in the reserved list.

8. *Increased consumption of firewood.*—As the Railroad is about to run through this district, there will be a great increase in the consumption of firewood. Mr. Yarde's report, paras. 20, 21 and 22, treat on this subject. The felling of fuel for the Locomotives will be restricted to certain tracts, and the Sub-Assistant Conservator is now giving this subject his attention. As the Railway will pay a large annual sum for firewood, it is hoped that our department will be able to establish firewood plantations, and this matter is now under consideration. The Collector of the District has been written to on the advisability of placing a small tax upon the iron smelting forges and the sugar cane, turmeric and indigo vats.

9. *Financial results.*—The financial results for the year are very favorable, the receipts amount to

Rupees 21,651-10-0 against Rupees 10,721-2-4 realized during last year, and the timber in depôt at the end of the year is valued at Rupees 1,811, against Rupees 400 last year.

The particulars are as follows :—

	Rs.	A	P.
Expenditure.			
Cost of establishment..	3,280	7	8
Working charges.	2,279	13	1
	5,560	4	9
Receipts.			
Seignorage for May 1863.	909	4	6
June	730	1	0
July	1,595	13	0
August	1,285	3	0
September	2,228	11	0
October	1,519	6	3
November	1,450	3	0
December.	2,103	6	6
January 1864	2,730	12	0
February...	1,667	13	0
March	2,197	13	6
April	2,401	5	3
	20,819	12	0
Sale of timber from depôts	862	6	0
Sale of confiscated timber.	149	8	0
	21,651	10	0
Deduct expenditure	5,560	4	9
Balance in favor of Government	16,091	5	3
Add balance of timber in depôt on 30th April, viz., 1,811-5-2, minus Rupees 400, balance in depôt on 30th April 1863	1,411	5	2
Financial result for 1863-64	17,502	10	5

(*Of the sum* 21,651-10-0 *collected during the year, the sum of* 19,428-2-9 *is for timber*; 1,017-9-6 *for firewood*; *Rupees* 4 *for Palmiras*; *Rupees* 163-13-9 *for Bamboos*; *Rupees* 206-2-0 *for Charcoal.*)

10. North Arcot.—*Polygar's forests interfere with Conservancy.*—Two Polygars own tracts of forest in this District, which much interfere with our Conservancy, and gives an opening to clandestine felling (vide paras. 2 and 3 of Mr. Yarde's report).

11. *Proposed extension of the Conservancy limits.*—It is now under reference whether certain other tracts of this District should not be also placed under the Conservancy Department: an increase to the establishment would then be necessary, but great advantages would undoubtedly accrue from the whole of the forests being under one department. Clandestine felling could be much more easily put a stop to, and the Revenue much increased.

Financial results.—The receipts for the year are Rupees 2,572-7-3, against the sum of Rupees 1,373-6-9 for 1862-63.

The particulars are as follows :—

Expenditure.

	Rs.	A.	P.
Cost of establishment	528	0	0

Receipts.

	Rs.	A.	P.
Seignorage for May 1863...	173	1	3
June	216	2	0
July	227	9	9
August	389	8	0
September...	172	12	0
October	240	12	0
November...	199	0	0
December	206	4	0
January 1864	94	12	0
February „	102	8	0
March „	181	0	0
April „	183	4	0
Sale of confiscated timber	185	14	3
	2,572	7	3
Deduct Expenditure...	528	0	0
Financial results for the year and balance in favor of Government	2,044	7	3

(Of the sum 2,572-7-3 collected during the year, Rupees 1,667-8-0 came under the head of timber; Rupees 648-13-0 under Firewood, and 70-4-0 under Bamboos.)

12. KURNOOL.—*Great increase of Revenue.*—The demand for timber must have enormously increased in this District, or else clandestine felling must have received a great blow. The receipts for the year are Rupees 37,287-13-0, against Rupees 17,287-11-6 last year.

13. *Increasing value of the Forests.*—There can be no doubt that when the Railroad progresses and the canals are finished, the forests of the Nallay Mallays will become of great value, and there will be an increasing demand for timber in the District, besides an Export; it will be then perhaps advisable that the Forest Department should undertake the systematic working of these forests with a regular establishment. I am not of opinion that the Revenue would be raised by this plan, but Conservancy would receive much more attention.

14. *Stopping of the destruction of Saplings.*—The Sub-Assistant Conservator has been very energetic in stopping the felling of saplings, and the sales of timber confiscated as cut clandestinely or in violation of the rules, amounts to Rupees 4,949-1-3, exclusive of the amount paid to informers.

15. *More assistance necessary from the Native Revenue authorities.*—The Sub-Assistant reports that he does not receive as much assistance as he might from the Native Revenue authorities.

Financial results.

Expenditure.

	Rs.	A.	P.
Cost of establishment	3,043	5	2
Working charges	377	7	2
	3,420	12	4

Receipts

	Rs.	A.	P
Amount recovered as seignorage	32,338	11	10
Sale of confiscated timber	4,949	1	2
	37,287	13	0
Deduct Expenditure... ...	3,420	12	4
Balance in favor of Government	33,867	0	8
Confiscated timber sold but not credited during the year...	158	15	11
Value of timber in depôt 1,500 Rupees, minus 300 the balance on 30th April 1863	1,200	0	0
Financial results for the year	35,226	0	7

16. MUDUMALLAY.—*Lease taken for 99 years*—A fresh lease has been concluded, and this forest has been taken by Government for a period of 99 years The Nellumbúr Rajah did not agree to the terms of the lease till three months after the commencement of the official year, which somewhat retarded our operations

17 *Operations for the year.*—52,730¼ cubic feet of Teak were felled and squared, 20,092 cubic feet were carted to Ootacamund for the Lawrence Asylum, and 34,921¼ cubic feet to Seegoor

18. *Why the forest shows a deficit*—The Lawrence Asylum had advanced a sum of Rupees 40,000 for Teak, shortly before the expiration of the official year this sum was refunded by the late orders of Government, and as the timber has not yet been delivered, a voucher has not been granted for the amount More than half of this timber however is now in depôt at Ootacamund, and the rest is under transport.

19. *No demand from the Merchants for timber*—Owing to the order of Government releasing 6,000 logs of Teak in Wynad which had been detained for three years, the market was unexpectedly overstocked with timber, and there has been no demand from the merchants for either Teak or jungle wood

20 *Teak Plantation.*—Preparations for forming a Teak Plantation have been commenced.

21. The Assistant Conservator in charge of these forests, has also charge of the Seegoor forests, Bhowani and Collegal, Nilgiri Sholas, and the Australian Plantations, the whole of his salary however is debited against Mudumallay, which of course lessens the receipts in this forest, though it swells that of the others

Financial Results

Expenditure					37,292	7	4
Receipts—sale of timber					15,287	6	8
Balance against Government...					22,005	0	8
Balance of timber on hand 30th April 1863...			1,21,123	3	0		
Deduct { Sold in 1863-64, ... Rs...	14,152	7	7				
{ Wastage and destroyed by fire... ...	1,550	0	0				
			15,702	7	7		
			1,05,420	11	5		
Add additional stock cut in 1863-64, 52,730¼ cubic feet valued in the different depôts at...			37,883	5	7		
Value of timber on hand on 30th April 1864 ...			1,43,304	1	0		

22. The timber cut during the year is valued at 37,883-5 7, and the balance against the forest being 22,005-0-8, the financial results are Rupees 26,811-4-2 in favor of the forest.

23. The Assistant Conservator forwards the following list of the timbers used commercially in the Mudumallay and Seegoor forests, their market values and remarks as to amount procurable and uses put to, &c.

Native names.	Botanical names.	Price in the forest.	Remarks.
Teak...	Tectona grandis... ...	Under 16 feet in length, 14 annas per cubic foot; above 16, Rs. 1-2-0; above 21, Rs. 1-10-0.	Towards the west grows long and straight, and yields beams 25 to 30 feet long in the Eastern portions; the growth is not so long, but the timber is tough and of good description.
Blackwood... ...	Dalbergia latifolia...	Rs. 1-2-0 per cubic foot.	Grows well both in the Eastern and Western parts of the forest; planks four feet wide obtainable.
Cedar...	Cedrela toona.....	1 Rupee per cubic foot.	Chiefly used for light furniture; not common in these forests.
Sal.....	Shorea sp.....	Given on the seignorage of 2 Rs. per bandy load.	Rather common in the Eastern parts, much prized for house-building and posts, as the white ants do not attack it; does not grow to a large size; logs of one foot in diameter only being procurable.
Vengay.... ...	Pterocarpus marsupium...	On the seignorage of 2 Rs. per bandy load.	Common, and of large size in all parts of the forest; does not stand wet or white ants, but is much prized for building, and makes good doors and door frames, and also furniture.
Kara Mardah. ...	Terminalia tomentosa.	Do.	Common, and of large size throughout the forest. Chiefly used when strength and elasticity combined are required. Much used for bandy poles and raftering.
Vellay Naga. ...	Conocarpus latifolius...	Do.	Of large size, and abundant in the drier parts of the forest. Much used by the Natives for house-building.
Ven Tek.....	Lagerstrœmia microcarpa...	12 Annas per cubic foot.	Used for raftering and flooring. Much prized by the Natives.
— ?	Grewia, 3 species.....	2 Rs. per bandy load on seignorage.	Used for handles of tools.
White Cedar. ...	Vitex altissima... ...	Do.	Wood prized by the Natives. Of small size, used for ploughs.
Satinwood. ...	Chloroxylon swietenia.	Do.	
Sandalwood. ...	Santalum album... ..	Averages 4 Rs. per maund (30 lbs)	Abundant in the drier portions of the Seegoor forests.
———	Acacia leucophlœa...	On seignorage 2 Rs. per bandy load.	Common, a good wood.
———	Acacia sundra... ...	Do.	Used for naves of wheels.
———	„ speciosa. ...	Do.	Wood much prized, common.
Matti..	Terminalia species...	12 Annas cubic foot.	Little used.

24. SEEGOOR.—*Sandalwood operations.*—The Sandalwood tracts have been systematically worked during the year, but no Teak or other timbers have been felled, as there has not been a demand.

25. *Sandal wood nurseries and plantations.*—The Assistant Conservator has formed large Sandalwood nurseries, and is doing his best to form good plantations; there are considerable difficulties to contend with, as is seen from his report.

26. *Roads.*—The road from Hussanoor to the Mysore frontier is in a wretched state; if this road could be repaired, a considerable tract of Blackwood, and Vengay forest, would be opened out.

Financial results.

Receipts, Sale of timber and Sandalwood...			32,719 10 . 4
Expenditure...			14,046 15 10
Balance in favor of Government...			18,672 10 6
Amount of timber on hand 30th April 1863			16,240 0 5
Amount of timber in depôt on 30th April 1864. (Unsold.)			
Sandalwood ...	4,200 0 0		
Teak, Vengay and other woods...	11,985 6 5		15,985 13 11
Balance in favor of forest for 1863-64 ...			18,672 10 6
Deduct deficiency in stock on hand...			254 2 6
Financial results for 1863-64...			18,418 8 0

27. BHOWANI AND COLLEGAL.—These forests were only handed over to the department at the commencement of the official year. Their most valuable product is Sandalwood, but there is also a large supply of Blackwood and Vengay, and other valuable timbers.

28. *Sandalwood only worked.*—The Sandalwood only has been worked, as there has not been a demand for other timbers.

Financial results.

	RS.	A.	P.
Receipts.			
Sale of Sandal wood	6,417	0	0
Expenditure	2,637	2	1
Balance in favor of Government and Financial return....	3,779	13	11

29. AUSTRALIAN PLANTATIONS.—These plantations show considerable growth, and will soon yield a supply of firewood and building poles.

30. *A saving effected in the superintendence.*—The employment of a European Forester solely to look after these plantations was a heavier charge than they could afford. Mr. Hall has been promoted to the rank of Sub-Assistant Conservator, and is at present in temporary charge of the Salem District. It is not proposed that the superintendence shall cost more than 40 Rupees per mensem in future—the cost hitherto has been 95. Forester Sheffield is at present in temporary charge in addition to his duties at Ootacamund, with an increased allowance of Rupees 40 per mensem.

31. *Planting.*—Seven acres were planted out with Acacia Mollissima and Robusta in trenches six feet apart, and the trees at three feet distance in the trenches, about 2,000 plants the acre. The season was an unfavorable one, from the failure of the North East Monsoon, and there have been a good many casualties.

Financial results.

	RS.	A.	P.
Expenditure	2,258	10	9
Receipts	154	4	0
Balance against Government	2,104	6	9

NILGIRI SHOLAS.—32. *Planting.*—23,000 Australian Acacias have been planted out into Sholas cut for firewood.

33. After the annual contract had been sold for felling firewood in the Davie Shola, to which a road has been made, two Sholas much nearer the Cantonment were required for Cinchona plantations, and the timber was put up to auction without any reference to the Forest Department or to existing contracts; these two Sholas contained about 20,000 bandy loads of firewood; this of course upset all the arrangements made by the Forest Department, and as it stopped all the Contractor's sales, it was necessary to make a refund to him. The two Sholas in question sold for 5,000 Rupees. Government afterwards ordered that the proceeds of this sale should be credited to the Forest Department, but up to this date only Rupees 1,622-3-6 have been paid, which was the amount of compensation paid by us to the former Contractor.

Financial results.

	RS.	A.	P.
Expenditure.			
Fixed establishment	2,060	12	5
Temporary do	109	10	0
Working charges, planting, &c.	1,472	9	2
	3,642	15	7
Receipts.			
Sale of firewood on contract	3,362	4	4
Charcoal contract	383	5	4
Sale of timber on seignorage	273	9	5
	4,019	3	1
Deduct expenditure	3,642	15	7
Balance in favor of Government	376	3	6

34. WYNAD.—*The demand for timber very small.*—There has been but little demand for timber from these forests, owing to the large supply lately thrown into the market and alluded to in para. 45 of the Conservator's Report for 1862-63, the price of Teak and other timbers has consequently been much lower than usual.

35. *Importance of communication with the coast.*—A cart road between Manantoddy and the western sea board has, I believe, been sanctioned by Government. When this road is completed, there will always be a sale for the timber from these forests, and the demand will probably be greater than the supply. As the Mysore Teak forests adjoining the Wynad belt have now been put under Conservancy, and are to be systematically worked, without the coast market which this road will open, it is doubtful whether the receipts from these forests will cover the expenditure; the stock of timber, however, will increase, and will eventually cover any present excess of expenditure. The Conservancy of these forests is most essential, they are the largest, and with the exception of the Anamallay forests (which is only leased), the best tract of Teak in the Presidency.

36. *Annual supply of timber calculated with regard to production.*—The Assistant Conservator who has thoroughly explored these forests, calculates that they can yield without any deterioration an annual supply of 35,000 cubic feet of Teak, 2,500 cubic feet of Blackwood and 2,500 cubic feet of Honé (Pterocarpus Marsupium) and a very large amount of Mattee (Terminalia Tomentosa). Before Conservancy came into force these forests suffered much from Kumri and wasteful felling, and he thinks that all previous reports have rather exaggerated the number of 1st class trees (*i. e.*, trees of six feet in girth.) Many acres may be traversed without a single 1st class tree being seen, and though he counted as many as 60 fine young Teak trees to a single acre in some parts, he does not estimate the yield of 1st class Teak trees throughout the whole Wynad belt at more than three per acre. Selecting the finest

tracts of Teak, he carefully counted the 1st class trees on 25 different acres, the largest yield was 15 per acre and the smallest three, the average was not quite seven per acre. Under Conservancy the average yield of Teak per acre will without doubt increase, but in the present state of the forest, returns of this nature cannot be of any practical use.

37. *Kumri.*—No cases of Kumri has occurred during the year.

38. *The Pulpilly forests.*—The Trustees of the Pulpilly forests are not willing to rent them to Government.

Financial results.

Expenditure.			
Establishment...		11,121	5 8
Working charges...		13,705	10 4
		24,827	0 0
Receipts.			
Sale of timber		18,054	10 9
Confiscations...		600	0 0
		18,654	10 9
Balance against Government...		6,172	5 3

Amount of timber in depôt.	Cubic feet.			
Teak on hand 30th April 1863....	33,094			
Add felled this year..... ...	47,209			
	80,303			
Deduct—Sold during 1863-64	24,189			
Burnt... ...	2,000			
	26,189			
Balance on 30th April 1864.	54,114			
	Valued at Rupees...	27,064	2	0
Blackwood in depôt... ...	167 do.	83	8	0
Honé and Muttee	297 do.	74	4	0
Total value of timber on hand...		27,221	14	0
Deduct value of timber on hand 30th April 1863 ...		18,678	5	3
		8,543	8	9
Deduct deficit...		6,172	5	3
Financial return for 1863-64		2,371	3	6

39. This is a very small return, but the market was very slack during the year, and timber realized every small prices—that on hand too has been valued at a very low figure. The fires were unusually severe from the extraordinary dryness of the season from November till April, and 2,000 cubic feet of Teak were burnt.

40. *Hunsúr.*—These Teak forests though under the Madras Government are within the Mysore boundary, and the Mysore Government is now very anxious to get them back, and the case is referred to the Supreme Government, they have been under Madras for upwards of 60 years.

41. *No demand for timber.*—For the same reasons stated under Wynad, there has been little or no demand for timber during the year.

Financial results.

Expenditure.

Cost of establishment ...	1,435 7 5			
Working charges.	6,039 13 2 =	7,475	4	7
Receipts.				
Sale of timber ...	1,296 4 10	1,296	4	10
Balance against Government		6,178	15	9

Amount of timber in depôt.	Cubic feet.					
Teak on hand 30th April 1863...	11,024½					
Add felled this year ...	31,176½					
	42,200½					
Deduct sold during 1863-64 ...	1,350					
Balance on hand 30th April 1864	40,850½					
	Valued at...			24,169	9	6
Honé and Muttee on hand ...		353 0 0 =		110	5	0
Total value of timber on hand				24,279	14	6
Deduct value of timber on hand on 30th April 1863 ...				6,454	2	9
				17,825	11	9
Deduct deficit				6,178	15	9
Financial return for 1863-64				11,646	12	0

42. The cost of the superintendence is all charged against Wynad (both these forests being under one Officer), this of course swells the return from these forests. The Teak in the depôt has been valued at only 10 Annas per cubic foot, and that in the forest at 8 Annas, which is considerably less than it ought to realize.

43. South Canara.—The Conservator went a complete tour through this District in November—his report forms Appendix A.

44. *Increase of establishment.*—The establishment in this District, which had hitherto been on too small a scale, was increased in November from Rupees 207-8-0 to Rupees 504-8-0 per mensem; this has enabled the department to carry on operations on a much larger scale.

45. *Felling operations.*—During the year 1,251 candies of Teak and reserved timbers, 539 7/16 candies of unreserved, and 62 Poon spars have been felled. Most of this timber has been stored in depôts on the river banks.

46. *Planting.*—6,000 plants of Teak and 31,231 of Black wood have been planted out in the plantations.

47. *A valuable new timber discovered.*—The Sub-Assistant Conservator forwards specimens of a valuable new timber tree, it proves to be a new species of Hopea (Hopea parviflora Bedd.), of the family of Dipterocarpus, or Sál tribe; it is called in Canarese Kiral Bogi; it attains a height of more than 100 feet, and a circumference as much as 12 feet; it grows abundantly along the face of the ghats from Andar in the Oodipee Taluk to Calloor in the Cundapore Taluk, but is not found elsewhere in the District; its wood is very hard and heavy, and as it is reported quite proof against white ants, it will probably turn out a

valuable building timber; it is much used by the Natives in house-building, but has never yet been brought to the coast market; the department is now felling some for the market.

Financial results.

Expenditure.

Cost of establishment ...	...	4,070	3	10				
Working charges ...	...	5,536	1	3	=	9,606	5	1

Receipts.

Seignorage paid upon timber	...	12,761	15	2				
Sale of confiscated timber	...	486	0	8				
Sale of timber ...	...	1,725	10	8				
Contracts, firewood for stills, &c.	...	5,344	15	0	=	20,318	9	6
Balance in favor of Government...	...			...		10,712	4	5
Balance of timber in depôt on 30th April 1863				...		5,224	10	8
Add timber felled during 1863-64	...			...		15,879	4	0
						20,603	14	8
Deduct sold in 1863-64	...			...		1,725	10	8
Balance of timber on hand 30th April 1864 ..				...		18,878	4	0

Particulars of timber on hand and valuation.

784½ candies of Teak at 7 Rupees per candy	...	5,491	8	0
116 „ of Black wood at 7 „	...	812	0	0
958¾ „ of Hebalsu at 8 „	...	7,670	0	0
551 1/7 „ of Junglewood at 3 „	...	1,654	12	0
62 Poon spars at Rupees 50 each	...	3,100	0	0
3 „ boats at „ 50 „	...	150	0	0
		18,878	4	0

Value of timber on hand 30th April 1864				...		18,878	4	0
Deduct balance „ „ 1863				...		5,224	10	8
Additional stock	...			...		13,653	9	4
Financial balance in favor of forest				...		10,712	4	5
Results for the year	...			...		24,365	13	9

48. NELLUMBUR.—*Operations.*—71,000 Teak saplings were planted out during the season. The great severity of the monsoon and the unusually high floods caused considerable damage to the young plants; 2,000 acres were weeded during the year.

Financial results.

Expenditure ...	...	...	...	...		13,925	5	1
Receipts...	...	...	...	...		6,691	2	4
Balance against Government	...	...		...		7,234	2	9
Deduct timber sold, but amount not realized				...		950	2	2
						6,284	0	7

Value of timber in depôt at Calicut, 30,000 Teak saplings and 33 Teak logs	12,600	0	0
Value of Teak, Irul, and Venteak logs stored in the forest...	17,481	0	0
40,000 saplings stored in the forest	15,000	0	0
	45,081	0	0
Deduct expences for carriage and floating on the two last items, say	9,481	0	0
Value of timber on hand	35,600	0	0

These returns show a balance for the year against the forest of Rupees 6,284-0-7 but a stock of timber on hand equalling 35,600 Rupees; this timber too has been valued at a very low rate.

49. The financial results for the year have not been as favorable as was anticipated, the chief reason was the great scarcity of labor, which prevented our bringing the saplings to market until after the season for export was past. The opening of our depôt at Calicut, too, was new to the public and was not known at any distance. When the saplings were put up to auction, no Arab traders were present, and the merchants seem to have combined to keep down the price and to prevent the success of our depôt. 10,000 saplings out of the 40,000 in depôt at Calicut were sold, and these realizing only the small sum of Rupees 2,160 the sales were stopped; this was less than four Annas each, which price they fetched last season lying in the plantations at Nellumbúr, and we had valued them at 8 Annas each in Calicut. By arranging our sales at the proper period, better results are confidently expected in future.

50. *Establishment disorganized by fever and other causes.*—Nellumbúr is a most feverish locality, and it is very difficult to get any of the establishment to remain long. The establishment is almost always in a disorganized state from sickness. The Rajah's word, too, is law at Nellumbúr, and neither the Rajah, nor any of his people give the assistance that might be expected from them.

51. Salem and South Arcot.—*Illness of the Superintendent.*—Lieutenant Borradaile, who was in charge of this range, was obliged to proceed on sick certificate to England towards the close of the official year. Mr. Hall, Sub-Assistant Conservator, is at present in temporary charge of the range. Lieutenant Borradaile's health has not allowed him to travel over his range as much as was necessary, and he was not able to carry out the proposed arrangements of working all the forests of the Denkenicottah Taluq; these forests have therefore remained under the License and Voucher system, and the Sandal wood tracts are the only forests as yet worked by the department.

52. *Private forests fast disappearing.*—Mr. Hall reports that the forests belonging to different Mutahdars are being fast denuded of all timber; these men are not willing to lease their forests to Government.

Financial Results.

Salem.

Expenditure.								
Establishment.	11,864	15	1					
Working charges.	2,385	6	2	=	14,250	5	3	
Receipts.								
Seignorage and sale of timber	21,666	2	8					
Sale of Sandal wood	9,757	14	0	=	31,424	0	8	
Balance in favor of Government...					17,173	11	5	
Balance of timber on hand on 30th April 1864; 1,66,054 lbs. of Sandal wood valued at.	23,200	0	0					
Deduct value of timber on 30th April 1863..	16,000	0	0					
Add excess of timber obtained during the year.					7,200	0	0	

SOUTH ARCOT.

Expenditure.

Establishment.	360 0 0		
Receipts.			
Seignorage on timber	2,316 0 0		
Balance in favor of Government.		1,956 0 0	
Financial result for the year in Salem and South Arcot.. ...		26,329 11 5	

53. ANAMALLAYS.—*Illness of the Superintendent.*—Captain Michael's illness at the commencement of the official year somewhat retarded operations in this forest. Mr. Spring, Sub-Assistant Conservator, was put in charge as Acting Assistant Conservator in the beginning of July.

54. *Operations.*—On account of the reasons above stated, the felling operations were not as extensive as usual. One thousand five hundred and odd dockyard planks were felled and trimmed, and a number of logs, head and butts. A large amount of carting, slipping, and floating was performed during the season.

55. *Sales of timber.*—There is a very large stock of timber on hand, but as the English Admiralty have not yet decided whether they will take the produce of these forests for dockyard purposes, it was not considered desirable to have any large sales. Small sales were effected to cover expenditure, and in addition to these timber to the value of 10,500 Rupees has been supplied to the Gun Carriage Manufactory; as this timber has not yet been delivered at Madras, the payment does not appear in the receipts.

Financial results.

Expenditure.			
Cost of establishment.	7,617 6 11		
Working charges..	29,596 10 3 =	37,214 1 2	
Receipts.			
Sale of timber.	28,719 15 2		
Seignorage from Chenat Nair forest ...	9,269 13 0	37,989 12 2	
Balance in favor of Government		775 11 0	
Balance of timber on hand on 30th April 1864*.	2,83,047 0 1		
Deduct value of do. on 30th April 1863 ...	2,60,571 0 11		
Add excess of timber obtained during the year		22,475 15 2	
Financial result for 1863-64,...		22,858 14 2	

56. CHENAT NAIR.—The jungle timbers in this forest have been systematically worked by the Railway Company. Rupees 9,269-13-0 have been paid as seignorage, and is credited in the Anamallay accounts. The Teak and Black wood has been reserved.

57. BOLAMPATTY.—The Voucher and License system has just been introduced for the forests of the slopes of the Coimbatore hills, the system is as yet hardly understood in the District, and there has been no demand for timber.

	Rs.
Expenditure., ...	64 0 0
Receipts	175 0 0
Balance in favor of Government...	111 0 0

* (NOTE.—Of this sum 10,500 Rupees worth has been sold to the Gun Carriage, but the amount has not yet been carried to account, as the timber has not been delivered at Madras.)

58. GOOMSUR AND SURADA.—The Conservator went a complete tour through these forests during the year. Appendix B. is a copy of his report upon them.

59. The establishment, which was too small, has been increased from Rupees 121 to 166 per mensem during the year, and now stands as follows:—

1	Overseer...	80
	Travelling allowance.	30
1	Writer	20
10	Peons.	36
		166

60. The returns have not hitherto been satisfactory, and little can be expected unless we can open a market for the fine Sâl timber which abounds in the forests. The local demand is sufficient to cover the cost of the small establishment at present entertained for Conservancy, and with proper supervision there is no doubt that it will do so.

Financial results.

Receipts.							
Seignorage on timber...	1,460	5	6				
Sale of confiscated timber. ...	19	4	0	=	1,479	9	6
Expenditure.							
Establishment	1,023	15	9				
Pruning operations and contingencies...	343	11	4	=	1,367	11	1
Balance in favor of Government...					111	14	5

61. MADURA.—*Financial results unfavorable.*—The financial results are not favorable. There appears at present to be little or no demand for timber from the Government forests. The different tracts of forest belonging to Zemindars chiefly supply the market. The Zemindars are not willing to lease these forests to Government, and the forest overseer reports that they are very wastefully worked, and that they are being fast denuded of timber. The forests of the Tinnevelly hills also supply Madura with timber. The Collector of Tinnevelly has just reported that he is favorable to a forest conservancy in his District, and that about 66 per cent. of the forest tracts belong to Government, the remainder to Zemindars. The Conservator hopes to be able to visit them during the ensuing year.

62. *The D. P. W. should look to Government forests for their timber.*—The Public Works Department will probably in future indent upon us for all their requirements in timber; it is certainly desirable that they should do so.

63. *Government forests annually increasing in value.*—The Government forests, in addition to much young Teak and a small Sandal wood tract, contain valuable tracts of timber (Vengay, white Cedar, Black wood, &c). The overseer gives much attention to conservancy, and the forests are annually increasing in value.

No sales from the depôt.—No sales were effected during the year from the depôt in the Cumbum valley, as the market was not favorable.

Financial results.

Expenditure.							
Pay of Establishment	2,723	8	0				
Working charges	1,718	3	10				
Total...					4,441	11	10
Receipts.							
Seignorage					3,187	10	6
Balance against Government					1,254	1	4
Timber in depôt, 7,733¼ cubic feet, valued at 8 Annas per cubic foot					3,866	11	0

65. *New Forest Rules.*—The new Code of Rules published in the Conservator's Report for last year were sanctioned and put in force soon after the commencement of the year; they have been found to act very well, and if acted up to strictly, the Government forests must gradually recover themselves, and clandestine felling will be kept in check.

66. *Forest Revenue in India as compared with Europe.*—The revenue of the forests in India has been compared with that in different countries in Europe, greatly, of course, to the disadvantage of the former; it should, however, be taken into consideration, that the whole system is in its infancy in this country, and that all the poorer class of Natives, and even the rich ryot, get almost all their timber without any payment whatever.

67. *A new Manual of forest operations.*—A new Manual has been published during the year; this contains a sketch of the working operations in each District, and all instructions and circulars to the Assistants in the department; it also contains copies of all periodical returns furnished by Officers of the department.

68. *Forest Chart, with memoranda.*—The Conservator is preparing a forest Map of the Presidency, with a memorandum for each District, giving the extent of forest land and a calculation of the amount of timber, &c.

69. *Botanical drawings.*—Appendix C. is a list of new and rare plants drawn in the office of the Conservator during the year. The remainder of the ferns of the Presidency have been delineated.

70. *The Poon Spar tree.*—Appendix D. is a description and drawing of this valuable tree—it has always been a question of doubt as to what tree yielded the Poon Spar of commerce. The Conservator lately stated that it was identical with the "Calophyllum bracteatum" (Thwaites), a Ceylon species. Specimens of this having been received from Ceylon, it turns out to be distinct, and is an undescribed species.

71. *The Kiral-bogi, a new and valuable timber tree.*—Appendix E. is a description and figure of the valuable new timber tree alluded to in para. 46 of this report.

72. *Total financial results for the year.*

Net profit for the year.	39,338	15	8
Difference in the value of timber in depôt on 30th April 1864, from the amount on same date 1863 ...	96,512	6	7
	1,35,851	6	3

73. The results for the year are very favorable; in addition to the net profit and the value of timber felled and not yet sold, a considerable amount has been expended in planting and general conservancy.

I have the honor to be,

Sir,

Your most obedient servant,

R. H. BEDDOME, CAPTAIN,

Officiating Conservator of Forests.

APPENDIX A.

CAMP SUMPAJEE, SOUTH CANARA,

29th November 1863.

From CAPTAIN R. H. BEDDOME,

Officiating Conservator of Forests.

To J. D. SIM, Esq,

Secretary to Government, Revenue Department,

Fort Saint George.

SIR,

1. I have the honor to report that I have completed my tour through the forests of the South Canara District.

2. The District is divided into five Taluqs :—Cassergode, Upinangadi, Mangalore, Udipee, and Cundapore.

3. All the valuable forests are situated on the slopes or at the foot of the line of ghats running from Malabar up to North Canara.

4. The chief forests in the different Taluqs are as follows :—

CASSERGODE.—There is Teak in this Taluq in the jungles north of Perambut, which are called the Málát jungles, all the trees of fine growth however have been taken out before conservancy came into force; there are about 100 large trees left, but they are what are styled "Nalaik," are twisted or knotted, or more or less damaged by fire, and were not considered worth cutting by the merchants years since; they are now however worth about 12 Annas to one Rupee per cubic foot. Saplings are coming on which will be of value in future years.

The forests on the face of the ghats contain Poon Spar trees (Calophyllum bracteatum), Ebony (Diospyros, sp.), Jack (Artocarpus integrifolia), Hebalsu or Wild Jack (Artocarpus hirsuta), and Black wood (Dalbergia latifolia), and some of the finest jungle timber in the District.

The forests in this Taluq have suffered most in the District from Kumri.

The Teak and Black wood plantations are in this Taluq at Kotiaddy about 12 miles west from Soobay.

UPINAUGADI.—*Sampajee jungles.* There is a fine Teak forest here as in the Málát jungles; all the finer large trees have been cut; there are about 10,000 Nalaik trees, and at least two lakhs of very fine growing saplings of from one to three feet in girth.

Soobay.—There is a good Teak forest here; all the finer trees have been cut; the "Nalaik" trees may be taken at 10,000, and the saplings, which are very promising, at two lakhs.

Soobramoney forests or the range of ghats.—Teak only near Norinki, indifferent and not much of it. Black wood and Poon abundant, a small amount of Jack and a considerable quantity of Wild Jack (Hebalsu jungles; timbers superior and very abundant. These are the jungles which supply the Mangalore market, and merchants are now felling in them on the Voucher and License system.

MANGALORE.—*Kudra Mulk jungles* or line of ghats.—No Teak Poon, Wild Jack (Hebalsu), and Black wood tolerably plentiful; jungle timbers very abundant.

N. B.—The jungles are difficult of access, and it would hardly pay to get the timber out at the present market rate.

UDIPEE.—*Someshwar jungles* or line of ghats.—No sign of Teak. Black wood and Poon fine, and tolerably abundant, Wild Jack (Hebalsu), a few, but very fine trees. Jungle timbers very abundant and fine. The better sorts Honé (Pterocarpus marsupium), Matti (Terminalia tomentosa), Tirapu (Conocarpus accuminatus), Marhwa (Inga xylocarpa), are particularly fine.

CUNDAPORE.—*Line of ghats.*—No sign of Teak. Black wood and Poon abundant, and very fine. Wild Jack (Hebalsu), and a few jungle timber most abundant and of exceedingly fine growth. Catechu (Acacia catechu) abundant.

5. There are four patches of Sandal wood in the District. 1st. In the Upinaugadi Taluq, about six miles from the town of that name, there are about 2,000 trees. 2nd. In the same Taluq, at Adoor, there are 500 trees. 3rd. In the Udipie Taluq, at Karkul, there are 2,000 trees (registered in the Collector's office). 4th. In the same Taluq, about four miles from Udipie, 500 trees. All these trees are young and none fit for cutting. The climate is, I think, too moist to grow good Sandal wood, and I am afraid that the trees will never form much heart wood, which alone has the fragrant properties.

6. We have a Black wood and a Teak plantation formed lately by Mr. Thompson in the Cassergode Taluq, about 12 miles from Soobay; about 30,000 Black wood saplings have been put down, and about 9,000 Teak, it was only commenced last year. With the Black wood Mr. Thompson has been very successful, far more so than we have been at Nellumbur; the seed germinate freely in his nursery beds, and the plantation is promising. The Teak, however, is, I am afraid, a failure; he did not succeed well with seed, and could only get a very small per centage; to germinate, most of the plants in the plantation are saplings brought in from the jungles, their growth is seldom straight, and is altogether poor compared with our Nellumbur plantations, and the cost has been more. Mr. Thompson has had no experience in Teak planting, and as there is much to be learnt, especially in the treatment of the seed, I shall direct him to visit the Nellumbur plantations in the month of April or May, when the sowing operations are going on. A Duffadar from that establishment might return with him a short period, and operations commenced at first on a small scale might be afterwards increased if successful. With the exception of Malabar, no District or climate is more favorable.

7. I was much struck with the fine growth of the young Teak trees in the Sampajee and Sooliah forests, they grow remarkably straight. All the ripe trees of straight growth were cleared out of these forests before the conservancy department was organized. There are some thousands of damaged Teak trees fit to cut, which are worth in the market about 1 Rupee per cubic foot. (Between 8,000 and 9,000 cubic feet has just been felled by the department, and Rupees 8,000 has been offered for the lot). Some four lakhs of fine young trees of from one to three feet in girth are coming on, and their growth seems almost equal to the Teak in Malabar. These two forests are decidedly the most valuable in the District, and will bring in large returns in future years if carefully conserved. Mr. Thompson gives them much attention, and has done a great deal in pruning and real conservancy.

8. The forests of the line of ghats in some parts of the District terminate near the base of the hills, in other localities they extend for some distance into the plains. The growth of timber is very fine, inferior, perhaps, only to Malabar and the Anamallays. The numerous rivers down to the coast give great facilities for bringing the timber to a market.

9. From the ghat forest to the sea-coast the country is undulating and much wooded, and very similar to Malabar; though there are no valuable forests, there is a considerable amount of good timber, particularly Jack. All the timber is of spontaneous growth, and there are no topes, as found in other less wooded Districts in this Presidency, but then there are scarcely any villages, the landholders living in isolated houses on their wurgs, or estates.

10. The forests of South Canara have suffered more from Kumri than any District in the Presidency. Thousands of acres of fine forest have been destroyed, and ground that once grew Black wood, Poon Spar, Teak, and other valuable timber, is now covered with a thick thorny impenetrable growth of rank vegetation. After the forest has been felled and burnt, only one crop is, I believe, taken off; forest trees never grow up again.

11. Kumri is of two sorts in this District, viz., Wargdar Kumri and Sirkar Cumiri, the former is only carried on in the Cassergode Taluq; and could not easily be put a stop to, as there is a clause in each pattah that the wargdar, or landholder, may Kumri annually to such an

extent as will cover a certain amount of revenue, though in former years enormous damage has been done to the forests in this Taluq; there is now a rule which limits Wargdar Kumri to jungle of nine years growth. If this rule therefore is strictly enforced, no virgin forests can now be kumeried, but only old Kumri, (*i. e.*, the rank growth above alluded to). Sirkar Kumri is where Government forest proper is allowed to be felled and burnt, this has, I am glad to say, been put a stop to; it will, however, require the co-operation of both the revenue and forest authorities to keep it in check. No Sirkar Kumri should ever be allowed without being previously referred to the forest Officer of the District,it could then be confined to old Kumri ground or to portions of the forest so inaccessible that timber could not be got out; there would be no objections to it under this provision.

12. Mr. Thompson is a very good Forester, he devotes his whole time and energy to the forests, he has thoroughly explored all the forests of his District, and I herewith forward a copy of a very valuable table of the contents of his forests which he has lately drawn up. All the reserved trees are entered separately, and the column for jungle trees includes the better kinds, viz., Marhwa, Tirapu, Bonapu, Honé, and Kal Vaghee, and all other jungle timbers of value. As far as I have been through the forests, I think that the number of trees entered in this list if any thing are rather below the mark.

13. The increased establishment so necessary for this District, and which was entered in the Budget for 1863-64 has only just received the sanction of Government. By this Mr. Thompson has been promoted to the rank of Sub-Assistant Conservator. As the sanction has arrived so late, it will be impossible to work out the amount of the estimate for the year—much timber and Poon Spars may be felled, but as the freshes in the rivers are now over, it will not be possible to get the timber down to the Coast or to have any large sales.

14. We are now working all the forests of this District, except the range of ghats in the Upinaugadi Taluq, *i. e.*, the Soobramoney jungles. These forests are valuable, as they supply the Mangalore market; all the timber in them is open to merchants on the voucher and license system, except the nine reserved trees mentioned in the seignorage list; they contain some very valuable jungle timbers. The felling all takes place at one period of the year and the floating at another season. All the trees are marked by the department. Water carriage is abundant, and all timber, and even firewood, is floated to its market; carts are not used anywhere in the District. Systematic smuggling is rarely attempted. Ryots, however, will always evade the seignorage when they can.

15. The ghat forests of this District are so valuable that they should be entirely worked by the department. The increased establishment has only just been sanctioned, and before we take up the entire working of the Soobramoney forests, it will be necessary that Mr. Thompson should bring this establishment into thorough working order. We should have a certain amount of timber in depôt for the supply of the Mangalore market. I propose, therefore, that the department take up the whole working of the forests from the 1st May 1865-66. An additional Overseer will be the only increase required to the establishment, but that will be quite necessary. The seignorage at which the merchants obtain the timbers is too low, considering the price that they fetch in the market, but as I propose that the department shall take in hand the entire working of the forests in a year and a half from this date, it is hardly worth while raising the seignorage.

16. The tenure of land in this District is peculiar; the wargs, or estates, are not clearly defined, the assessment is upon the amount of grain capable of being sown, and not upon a measurement of the land. I have therefore arranged with the Collector that the Forest Department shall forward him a list periodically of all the tracts in which felling either for timber or firewood is to take place; this list will be published in the District Gazette, and if there are any claims upon the land they will receive the attention of the revenue authorities before the Forest Department commence operations. This plan should continue in force until there has been a regular survey of the District (a thing much required).

17. The Soobramoney temple lately laid claim to some valuable forest tract on the ghats in the Upinaugadi Taluq, they have, I believe, no right or title to them, and their only claim is that they may have made use of them at a time when little or no attention was given to the forests of the Presidency. I am not certain that they still intend to urge this claim, but I think it is important that the matter should be enquired into by the revenue authorities and at once settled, or it may give rise to disputes at some future period.

18. The rights of the ryots are different in this District from any other part of our Presidency.

Every Wargdar holds a certain amount of land called Kumaki, which often contains valuable timber. In 1823, Mr. Harris (the Collector) allotted 100 yards in every direction from cultivation, it was given as an auxiliary to the cultivation, and the ryots use the leaves and loppings for manure. In a subsequent order of the Board of Revenue, six trees were reserved to Government by the Board, viz., Teak, Blackwood, Jack, Wild Jack, (the Angelli of Malabar and the Hebalsu of Canara), Poon Spar, and Sandal, all other timber may however be felled by ryots for their own use; of the trees reserved, few are ever met with on Kumaki except the Jack and the Angelli, these are common; there are plenty of other valuable timbers, such as Mango and Dhup, "Vateria Indica."

19. Government will perceive from what I have stated in paras. 11, 14, and 18 of this report, that a great portion of the code of rules sanctioned for this Presidency would not be applicable to this District. I have therefore in personal communication with Mr. Morris the Collector, drawn up a set of rules to be put in force in South Canara. In framing these rules, all the orders of the Board concerning the forest tracts of the District and the rights of the ryots have been consulted, and care has been taken that the full proprietary rights of the landholders should be in no way curtailed. It is important that these rules should be sanctioned by Government and widely circulated in the District, as many of the Wargdars claim Kumaki land to a far greater extent than has ever been sanctioned by the Board, and in some cases the usufruct of considerable tracts of Government forest are laid claim to simply on the plea that felling has been allowed there in former years.

20. I forward with this report a copy of the Code alluded to, and the seignorage list, as numerous references and much inconvenience has resulted from the want of a regular code of forest rules in this District; the Collector has put these in force temporarily pending the sanction of Government, when they will be printed in the Gazette and circulated throughout the District.

21. In explanation of the rules I beg to add the following remarks.

Rules 1, 2, 3, 5, 11, 12, 13, 14, 16, 17, 19, 20, 21 and 22 are the same as those in the Code lately sanctioned by Government. Rule 6 is always carried out in this District, the forests of the ghats where only the merchants fell for the market are concentrated, and the felling all takes place at one season, there is therefore no difficulty in marking the trees. Rules 7 and 8 are framed in accordance with the orders of the Board in the Collector's office, and Mr. Malthy's order, 10th August 1854.

Rule 9. It is only fair to allow ryots to fell the reserved timbers on the Kumaki land except Sandal wood, if they pay the seignorage for them; no one else, however, except the Forest Department itself should fell these reserved timbers, as it might give rise to endless complaints of depredations.

Rule 10. Provides for those ryots who have not sufficient timber for their use on their Kumaki land. Some wargs have little or no timber on their Kumaks, whereas others have more than sufficient, and should not be allowed to fell in other tracts simply to keep their Kumaki untouched.

Rule 16. Has been slightly altered to suit the District.

Rule 18. A year should be allowed in the merchants' licenses, as timber that is felled after the monsoon cannot be floated until rivers are again full. Three months is ample time for villagers and others felling timber in the 2nd class forests in the plains.

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) R. H. BEDDOME, CAPTAIN,

Officiating Conservator of Forests.

Rules for the Conservancy of the Forests in the South Canara District.

1. All parties found felling trees or removing timber or firewood from Government jungles and forests in breach or disregard of the prescribed rules will be liable to criminal prosecution for theft, mischief, or trespass, as the case may be under the Penal Code and to confiscation of the timber, &c.

2. The trees and shrubs which fringe springs and mountain streams (to a distance of 20 yards from each bank) are not to be felled, parties felling or recklessly injuring the same will be liable to criminal prosecution.

3. Charcoal burners or others setting fire to any of the Government jungles or forests will be liable to be prosecuted for "mischief" under the Penal Code.

4. No forest land is ever to be felled for Sirkar Kumri cultivation without the sanction of the Forest Department, parties acting in disregard of this rule will be prosecuted.

5. A list of all timbers allowed to be felled by merchants and ryots, and the seignorage payable thereon, is published in the District Gazette, and may be obtained by applying either at the Collector's office or at the office of the Forest Department. A copy will also be kept in each village of consequence in the District.

6. All trees given out to merchants on seignorage will be marked by the Forest Department.

7. Ryots in possession of Kumaki land are allowed to cut all timbers on that land free of charge, except Teak, Black wood, Jack, Wild Jack, Poon, and Sandal.

8. Kumaki land is all land within 100 yards of cultivated land.

9. Felling of the six timbers mentioned in para. 7 of Kumaki land is reserved to the Forest Department, and will not be granted on seignorage except to the ryot in possession of the Kumaki.

10. Ryots who have not sufficient timber for their requirements on their Kumaki land are allowed to cut the unreserved kinds of timber free of charge for agricultural purposes within their village boundaries, but if they require the reserved kinds of timber they must pay the fixed seignorage.

11. All trees must be felled within three feet from the base.

12. Villagers are in all cases allowed to cut firewood from low scrub jungle for their own use free of taxation.

13. Where firewood is liable to taxation, the seignorage payable thereon is notified in the District Gazette, and in the villages to which the rules may be applicable.

14. The seignorage upon bamboos shall be levied at the rate published in the Gazette of each District. Ryots allowed to cut bamboos for agricultural purposes or for the *bonâ fide* erection of their houses free of any taxation.

15. Charcoal burners should not fell the reserved timbers, and may only fell unreserved timbers in such localities as shall be assigned by the Forest Department. In cases where seignorage is payable upon charcoal, it will be published in the District Gazette.

16. Parties wishing to fell timber in Government forests shall pay the seignorage for the number of candies required in advance into one of the Taluq Treasuries, and shall receive from the Thasildar a numbered voucher (in duplicate) from the voucher cheque book for the same. The Forest Department, on receipt of the voucher, shall grant a printed license for the number of candies paid for, and shall attach thereto the duplicate vouchers, the name of the wood being specified, or (if not one of the reserved kinds) the same being entered as jungle wood. When the timber is cut by merchants, it will be measured in the river by the Forest Department and the license given up at the tannah station. When cut by villagers or ryots near their villages, after the timber has been brought in, the voucher will be delivered up to the potail or forest duffadar and forwarded to the thasildar.

17. The portion of the forest in which the felling is to take place shall be specified in each license, as well as the tannah station or village when the license is to be given up.

18. The time allowed for merchants' licenses to run shall not exceed 12 months. License for felling near villages are not to run more than three months.

19. Any one felling trees in the forests or removing the same within the limits of the tannah stations must be ready to produce both his voucher and license when required.

20. Time-expired licenses must be given up, even though the timber paid for has not been removed.

21. All confiscated timber shall be arranged and numbered off into lots by the Forest Officer, and shall be sold by public auction after due notice shall have been given in the District Gazette, and also, if the timber is of much value, in the *Fort Saint George Gazette*. All purchasers will be required to pay the price of the timber purchased into the Taluq Treasury, and to produce the thasildar's vouchers for the same before they remove the timber.

22. In the event of the confiscated timber being sold by auction, 50 per cent. of the net profits will be paid to the informer, whether he belongs to the Forest Department or not.

(Signed) R. H. BEDDOME, CAPTAIN,

Officiating Conservator of Forests.

MEMORANDUM

Of the Forests in South Canara, describing their situation, with an Estimate of their contents.

	Probable number of trees.									Remarks.
	Teak.	Black.	Jack.	Wild Jack.	Seeri-poona.	Ebony.	Sandal.	Jungle.	Catechu.	
Condapore Taluq.										*Nursipurum River.*
Koikadee.....	...	1,000	...	...	...	...	...	10,000	...	The Black wood in this jungle is small, but of good kind. Of jungle wood Mutti and Bellundoo (Conocarpus latifolius) preponderates.
Bynedoor....	...	...	...	...	...	...	...	...	20,000	These catechu gum trees are fit for cutting, and a contract for the same will be given. Jungle wood is scarce in this locality. The slopes of the ghauts have all been under Kumri cultivation.
										Gurgunga River.
Hosungady...	...	1,000	...	1,000	...	...	...	10,000	...	No sign of restricted timber here, except a few wild Jack wood trees. Bamboos are in abundance.
										Chackramvatty River.
Beergoondy...	...	...	...	...	10,000	...	...	20,000	...	This jungle though it appears to be within my range is claimed by the My-ore authority. Mutti Bellundoo, and Tirva preponderates. There is pepper in this jungle.
Qusilekhully...	...	...	...	...	...	...	...	10,000	...	There is no sign of restricted timber here.
Jedkull...	...	2,000	...	...	...	...	...	30,000	...	The Black wood is small, few trees are fit to cut, Mutti and Bellundoo (Conocarpus latifolius) preponderates.

Colloor...	...	12,000	...	...	2,000	...	...	30,000	...
Total.....	...	16,000	...	1,000	12,000	...	...	1,10,000	20,000
Oodapee Taluq.									
Mala...	...	...	...	1,000	1,000	...	...	30,000	...
Andar..	...	...	...	200	2,000	...	...	20,000	...
Someshwar..	...	6,000	...	...	2,000	...	...	50,000	...
Kurkul	...	...	...	...	...	...	2,000	2,000	...
Kondady	...	...	...	. .	...	...	500	...	...
Total.....	...	6,000	...	1,200	5,000	...	2,500	1,02,000	...
Mangalore Taluq.									
Naravi	...	1,000	...	2,000	1,000	...	...	50,000	...
Total.....	...	1,000	...	2,000	1,000	...	. .	50,000	...

Barree River.

The timber in this jungle is of a very good kind, but is far off the river, being 7 or 8 miles. The Seeripoona grows on the higher slopes of the ghaut leading to Nagoody. Bamboo grows abundantly in this locality.

Tannahollah River

The whole of the timber is on the slopes of the ghaut, and not easily got at. The Seeripoona, however, would be worth taking out.

Do. do. do.

Satanady.

The trees are all good in this jungle, and the river runs through its centre. There are a number of young trees here.

The jungle timber trees are all young and not of a good kind; they are growing in a scrubby jungle where the villagers have permission to cut firewood and leaves.

The above remarks will answer this place also.

These trees are on the slopes of the ghaut and 30 miles away from water carriage. To make a road to this jungle would be both difficult and expensive.

MEMORANDUM

Of the Forests in South Canara, describing their situation, with an Estimate of their contents.

	PROBABLE NUMBER OF TREES.									Remarks.
	Teak.	Black.	Jack.	Wild Jack.	Seeri-poons.	Ebony.	Sandal.	Jungle.	Cathu.	
OOPERUNGADY TALUQ.										
										Natravally River.
Neriya...	...	2,000	...	1,000	1,000	...	...	2,000	...	This jungle is also far from water carriage. There is Cardamom here, and the jungle is rented out on that account.
Shishal...	...	...	...	...	...	...	...	...	...	There is no timber here worth any thing, it is a bamboo jungle.
										Seerady River.
Seerady...	...	1,000	...	1,000	2,000	...	...	10,000	...	The greatest part of these trees are convenient to the river. The Seeripoona (Poon Spar) are short for spars, but some of them are large enough for boats. The other timber is good.
										Kumardary River.
Soobramoney... ...	...	5,000	...	10,000	2,000	...	...	20,000	...	This was at one time a valuable jungle, but is now nearly exhausted. At present, the best part of it is claimed by the priests of the temple.
Ooperungady... ...	...	...	...	...	...	...	...	...	500	These trees are of a good kind, but too young for cutting.
										Kumardary River.
Nerinky...	1,000	...	...	...	...	...	...	...	...	There are some young good trees in this jungle, but all that was fit to cut has been taken away in former years.

Omar and Kudumkul..	...	4,000	1,000	5,000	2,000	...	...	20,000	...
Bellary	...	1,000	500	2,000	...	...	...	10,000	...
Sumpujee	2,10,000	...	...	...	...	...	...	...	...
Sooliah	2,10,000	...	...	...	...	...	...	15,000	...
Adoor	...	...	...	...	...	...	500	...	...
Total...	4,21,000	13,000	1,500	19,000	7,000	...	1,000	77,000	...
CASSERGODE TALUQ									
Kuntoor	1,000	1,000	...	...	...	...	...	15,000	...
Adoor	...	...	...	...	...	...	...	...	5,000
Panatoor	...	...	500	1,000	...	500	...	1,000	...
Maloot	..	2,000	1,000	3,000	800	1,000	...	20,000	...
Total...	1,000	3,000	1,500	4,000	800	1,500	...	36,000	5,000

Kumardary River

Seeripoona are short, the greater number are only fit for boats. The remainder of the timber is good.

Kumardary River.

The jungle is on the banks of a nullah which joins the Kumardary river near Buramungal.

Saplings from one to three feet in girth, at the base of which 10,000 are Nalaik trees.

Payaswany.

There was good timber once in this jungle, but it is now exhausted, the young trees are springing up again, and with care it may become a valuable jungle hereafter; 2,10,000 Teak trees, of which 10,000 are accounted as Nalaik, and the others are saplings from one to three feet in girth at the base.

The trees are young and not fit for cutting.

Payaswany River.

The Teak wood is inferior, it is classed under the head of Nalaik. All the good trees were cut in former years, but there is a second growth springing up which will be good timber in future years.

This jungle had been all under Kumri cultivation. In former years timber has been cut down with no regard to its value.

Panatoor River.

The country round here has been nearly all under Kumri cultivation. It must have been a valuable jungle once.

Maloot River.

The Seeripoona is short, few trees are fit for spars. The greater part of this jungle has also been under Kumri cultivation.

The above are the principal available jungles in the District, most of them have been worked for years by the merchants on the seignorage system. The probable number of trees put down here excludes less than three feet in circumference, and also those of unsound growth, with the exception of Teak and Sandalwood trees.

List of timber and seignorage payable in the South Canara District.

1. The following timbers being worked by the Forest Department are not given out to the merchants on seignorage.

Teak.	Tectona grandis.	Súgwana.
Black wood.	Dalbergia latifolia.	Biti.
Jack wood.	Artocarpus integrifolia.	Halasu.
Wild Jack.	Artocarpus hirsuta.	Hebalsu.
Sandal.	Santalum album.	Ganda.
Poon Spar.	Calophyllum bracteatum.	Seeripoona.
Ebony.	Diospyros, Sp.	Ebanis.
Gum tree.	Acacia catechu.	Cateku.
Heavy Poon.	Calophyllum, Sp.	Kalpoona.

Teak.
Black wood.
Jack.
Wild Jack.
Poon.

2 The ryots are entitled to the reserved timbers as per margin for their own use, when growing in Kumaki land and near their villages, upon payment of a seignorage of Rupees four per candy.

3. Palmyras are allowed to ryots as above at one Rupee per tree.

4. The following timbers are allowed to merchants in those tracts of forests worked on the Voucher and License system at the undermentioned rates of seignorage.

	Canarese.	
Pterocarpus marsupium	...Honé.	At one Rupee per candy.
Terminalia tomentosa	...Bonapæ.	
Conocarpus acuminatus	...Tirapu.	At one Rupee per candy.
Inga xylocarpa	...Marwé.	
Acacia, Sp.	...Kal vaghee.	

All other jungle wood trees (*i. e.*, not reserved trees) at eight Annas per candy.

5. Merchants are allowed to cut boats out of the jungle timbers at a seignorage of four Annas per running foot.

6. Firewood to pay a seignorage of 10½ Annas per cargo boat load (containing 42 loads), or three pie per head load.

7. Bamboos to pay a seignorage of 12 Annas per 100.

(Signed) R. H. BEDDOME, Captain,
Officiating Conservator of Forests.

APPENDIX B.

OFFICE OF CONSERVATOR OF FORESTS,
Camp Berhampore, 28th January 1864.

FROM CAPTAIN R. H. BEDDOME,

Officiating Conservator of Forests.

To J. D. SIM, Esq.,

Secretary to Government, Revenue Department,

Fort Saint George.

SIR,

1. I have the honor to inform you that I have completed a tour of inspection through the Goomsur forests.

2. The most valuable Government Forests of the District may be said to form a half circle round Russelcondah, commencing at Bodaga to the South-east, thence circling round through Kurcholy, Juggernatparsad, Bontha, Kookooloobah Gullery, and Beeracoote, to Dohu on the west. Starting from

Bodaga, I travelled through the whole of this tract; the forests, generally speaking, cannot be compared to some of our Western forests, but they are very valuable from the immense yield of Sál (Shorea robusta), a valuable timber unknown in any of the Government Forests to the south, though the tree grows in the forests of the Jeypore Zemindary and in the Nizam's Forests on the banks of the Indrawatty. The whole country about Russelcondah is more or less forest, and chiefly Sál, but some valuable tracts to the west of Surada belong to Zemindars.

3. Many tracts of the forest are composed almost entirely of Sál, it growing up very thick and close, to the exclusion of almost every other tree, and giving one the idea of walking through a plantation rather than an indigenous forest. The tree is of finest growth in the Gullery and Kookooloobah forests, and the first class trees have a girth of from six to nine feet. The next timbers most worthy of notice in this District are the Red Cedar, or Sohu (Soymida febrifuga), and the Pasi (Conocarpus acuminatus), the former of these two (a very valuable but rather scarce timber in most of the forests of this Presidency) is very abundant in these forests, and is to be met with of large size; the Natives have a superstition against using the timber, which accounts for the abundance of fine trees to be met with. Of the Pasi (perhaps the most graceful of forest trees), superb beams are procurable, and the tree is tolerably abundant. The Black wood (Sissua), the Satin wood (Bheyru), the Ebony (Kendhu), the Pterocarpus marsupium (Pia Sahu) are all to be met with in these forests, though not very abundant. There is, however, no vestige of Teak. Of the superior jungle timbers, the following are most abundant; Dohu (Conocarpus latifolius), Sahaju (Terminalia tomentosa), Kusum (Schleichera trijuga), Holonda (Nauclea cordifolia), Moholu (Bassia latifolia), and Kosi (Briedelia retusa).

The following also are tolerably abundant and much used for various purposes; Maha Nimu (Melia Azaderach), Bandhona (Dalbergia Oojeinensis), Gambari, (Gmelina arborea), Juntia (Schrebera swietenoides), Kadambu (Nauclea Cadamba), and Munda Munde (Nauclea parvifolia.)

The Bael fruit tree is most abundant throughout the forests, as also is the Mohulu (Bassia latifolia), which latter is strictly conserved by the Natives on account of the intoxicating liquor which is distilled from its flowers.

4. I annex to this report an Oorea and botanical list of all the trees of the District. Several Oorea lists have been published before, but the trees have not been identified botanically. The native names were checked in several different forests, the same names are in use throughout the Kimedy forests.

5. There is water carriage to the coast from several of the best tracts of the Sál Forest, and timber can be floated during the rainy month to Ganjam; from other tracts, however, timber has to be carted a considerable distance to the river banks.

6. If the Sál timber is as valuable for Gun Carriage purposes, as I believe it to be, it would certainly be a good plan for the Gun Carriage Manufactories to establish a branch establishment at Aska, or at all events a depôt or workshop where the timber could be worked into half wroughts. Aska is on the bank of the river, only some 30 or 40 miles from the seaport of Ganjam, whence the timber (either manufactured or in half wroughts) could be shipped for any of the Presidencies. With an adequate Forest Establishment, several hundred thousand cubic feet of Sál could be delivered at Aska annually, at a cost (exclusive of Government seignorage) of somewhat less than six Annas the cubic foot; under proper conservancy too, the forests could yield this supply without any great deterioration. This proposal is, I think, worth the consideration of the Ordnance Departments of the three Presidencies.

7. The real value of Sál timbers is not, I believe, fully known in the Madras Presidency; there is I believe no timber equal to it for Engineering purposes; its durability under water and under ground is perhaps unequalled, and it is quite proof against white ants. In the event of the last mentioned plan not being carried out, it is probable that the Gun Carriage Departments, the Railways, and the Department of Public Works might each stipulate to take a large quantity of Sál annually, to be delivered at Ganjam.

8. If either of the abovementioned arrangements could be made, I would recommend that these forests be put under a trained Forester (from England or Scotland), on the same footing as our Forester at Nellumbur; this, with an adequate establishment, and depôt at Ganjam, could be carried out at the cost

of about 500 Rupees per mensem. These forests could then be worked to advantage, and could, I have no doubt, be made to yield a good revenue. Some strong Buffaloes would be required, and perhaps two or three Elephants; the expense of keeping the latter animals in this District is very small. Russelcondah would be Head Quarters of the Establishment, and it is healthy all the year round. The finest tracts of forests are within a radius of 20 miles, and though feverish at certain seasons, they are quite healthy at others.

9. If, on the other hand, neither of these plans can be carried out, we have only the District demand to look to, which is very small, as the ryots, villagers, and others, fell the Sál and other reserved timbers indiscriminately, without paying any seignorage. Very few ships ever touch at Ganjam, and they ask enormous freight for shipping Sál logs; we could not therefore calculate upon any export, without which, considering what an enormous area there is of Sál Forest, it would be hardly worth while reserving the whole of it, or taxing the inhabitants for its consumption, although it could be easily done if the Sál was required, as there is abundance of other good timbers well adapted for all purposes to which the Sál is put to by the Natives; under these circumstances I can only propose a small establishment of an Overseer and 10 Peons (as now employed). A small tax paid by the merchants who fell for sale and by the Department of Public Works, would cover this, though no large revenue could be expected; but with a good Overseer in charge much might be done in the way of conservancy, such as the prevention of felling saplings likely to become fine trees, and confining the felling of small timber to those portions of forest where thinning was necessary, or where timber was of stunted growth, and the stopping of Kumeri in the finer tracts of forest, &c. Without these precautions, the forests must annually decrease, and some years hence, when communications in the District are more opened out, and transport by sea easier, and the Sál timber is in much greater demand, it will be discovered that these forests had been greatly injured.

10. An Overseer (Mr. Brown) was put in charge of these forests lately by the Collector, and they were subsequently handed over to the Conservancy Department; the establishment at first appointed was only two Peons, this has just been raised to ten. Besides levying a small tax on timber cut for sale by merchants, nothing has as yet been done; the Public Works Department have been allowed to cut all timber free of any taxation, and villagers and others fell all timbers, reserved or otherwise, indiscriminately, without any tax. As Sál is the best timber for building purposes, and as it resists the attack of white ants, it is always employed by Natives for building purposes, and fields are often fenced in with Sál saplings. Some hundred thousand saplings of a few inches in diameter must be annually cut. Without conservancy, those nearest at hand are of course felled; under conservancy, the felling of timber of such small girth might be restricted to the slopes of the hills and other rocky localities where it is naturally stunted, or to portions of the forest where thinning would be judicious. The seed of the Sál has such an extraordinary susceptibility of germination, that the saplings come up very thick in some parts of the forest, and thinning is really as necessary as it is in a plantation. The Khonds build the walls of their houses of planks of Sál in lieu of mud. Kumeri is carried on by the Khonds and Ooreas to a great extent, superb tracts of Sál are annually burnt in this way, and are cultivated for two or three years with castor oil, mustard, or raggi, and are then deserted for a fresh clearing. Kumeri is not so destructive in the Sál Forests however as it is in the forests to the south, owing to the very rapid germination of the seed above alluded to, the tree sometimes establishes itself in a deserted Kumeri, and I have seen some such tracts where Sál saplings were coming up as in a plantation; this is an exception however, and not often the case. In a country where there is such an enormous area of forests, it would hardly be advisable to put an entire stop to Kumeri. It should not, however, be allowed in the best tracts of forests (which are those now generally selected), and every thing should be done to try and persuade the people to take up land for permanent cultivation, and to go to the expense of manuring. Kumeri cultivators might perhaps be compelled to fell and stack the finer timber; the larger trees are never felled and burnt to improve the soil, but are simply ringed and burnt standing.

11. The present Overseer, Mr. Brown, is, I regret to state, a drunkard, and is besides physically unfit for the work; he has tendered his resignation, so it is not necessary for me to enter more fully upon the subject; I propose sending an Overseer who has already had some training in one of our western forests to relieve him.

12. If the forests cannot be worked to the extent proposed in paragraphs six and seven of this report, or until they can be so worked, I request sanction for the following Establishment, amounting to Rupees 166 per mensem :—

Proposed Establishment.	Rs.	*Present Establishment.*	Rs.
1 Overseer	80	1 Overseer	75
Travelling allowance	30	1 Writer	10
1 Writer	20	10 Peons	36
10 Peons	36		
	—		—
Total...	166	Total...	121

This, it will be perceived, is an increase of Rupees 45 per mensem over the present Establishment; the difference is in the pay of the Overseer and Writer, that at present sanctioned not being sufficient.

13. In the event of this smaller Establishment only being sanctioned, I propose that some portions of the finer and more accessible tracts of the Sál forest should be marked off and strictly reserved.

14. The following is the seignorage list that I propose for this District.

Reserved timbers.	
Saliva (Shorea robusta)...	Rupees 1-8-0 per bandy load when carted, or per log first class, or per 25 cubic feet, 2nd and 3rd class, when floated.
Sissua (Dalbergia latifolia)...	
Kendhu (Diospyros melanoxylon)...	
1st Class timber.	
Pia Salu (Pterocarpus marsupium)....	Rupee 1.
Bheyra (Satin wood)...	
Pasi (Conocarpus acuminatus)	
Sohu (Soymida febrifuga)...	
Sahaju (Terminalia tomentosa)...	
Bandhona (Dalbergia ocjeinensis)...	
2nd Class timber.	
Mohulu (Bassia latifolia)...	12 Annas.
Kusum (Schleichera trijuga)...	
Dohu (Conocarpus latifolius)	
Holondah (Nauclea cordifolia).	
Kambamba (Nauclea Cadamba)	
Munda Munde (Naucles parvifolia).	
Gumbari (Gmelina arborea)	
Kosi (Briedelia retusa).	
Maha Nunnie (Melia azedarach).	

All jungle timbers (not classed)..	0	8	0
Bullock or donkey load of unreserved timber.	0	1	6
Man's load of do. do.	0	0	4
Bandy load of firewood (or 750 lbs.)...	0	2	6

15. The seignorage here proposed is slightly more than that recommended by the Collector (vide Proceedings Board of Revenue, No. 7,178, dated 11th November 1863); it is, however, very small, and far less than in any other District, but wages and prices are very low in this District.

16. If the plans proposed in paragraphs six and seven of this report can be carried out, I think that every one should be taxed for the reserved timbers; if, however, there is to be no market for the Sál, it would perhaps be advisable only to tax timber felled for sale, or for public works, and not what is cut by the inhabitants for their own use. Or a very small annual tax might perhaps be paid by each village

for the privilege of cutting reserved timbers. None of the reserved, or the first or second class timber, should ever be felled for firewood.

Oorea and Botanical list of the Trees in the Goomsúr Forests.

Achu	Morinda tinctoria.
Ambeletoba	Citrus, sp.
Arjuna	Terminalia Arjuna.
Akola	Alangium Lamarkii.
Ambhota	Bauhinia racemosa.
Ambo	Mangifera indica.
Asoká	Jonesia Asoca.
Amrá	Spondias mangifera.
Borará	Bauhinia variegata.
Ballia	Semicarpus anacardium.
Bai dhimeree	Ficus, sp.
Barokolee	Zizyphus, sp.
Baélo	Pterospermum suberifolium.
Bámemia	Gardenia turgida.
Bandhoná	Dalbergia oojeinensis.
Bonichá	Flacourtia sapida.
Boru	Ficus indica.
Bhatá jamá	Eugenia caryophyllifolia.
Beygoonás	Vitex Negundo.
Behentá	Limonia acidissima.
Belloo	Aegle marmelos.
Bheyreé.	Chloroxylon swieteniá.
Bodaká	Hymenodyction excelsum.
Bhárá	Terminalia Bellerica.
Bona koniari.	Ochna squarrosa.
Bouro.	Bombax malabaricum.
Bona hendi.	Eriochloena hookeriana.
Cháru	Buchanania latifolia.
Cháldua	Erythrina indica.
Champá.	Michelia Champaca.
Dhámmous.	Grewia tiliœfolia.
Dhimeri	Ficus glomerata.
Dohu	Conocarpus latifolius.
Dhálasinghá	Vitex pubescens.
Dhobi	Dalbergia painculata.
Gondhoná	Premna latifolia.
Girari	Casœaria tomentosa.
Ghota	Zizyphus xylocarpa.
Guru hadu	—
Gumbari.	Gmelina arborea.
Gondapalasu	—
Gonhareá	Acaciá suma.
Gongo bábul	Acacia arabica.
Gongo sheoli.	Nyctanthes arbor tristis.
Gormi kawat	Ailanthus excelsus.
Gusvakendhu	Diospyros glutniosa.
Haredhá.	Terminalia Chebula.
Hinjolo	Barringtoniá acutangula.

Holondhá.	Nauclea cordifolia.
Juntiá	Schrebera swietenioides.
Jari...	Ficus tsiela.
Jundá mari.	—
Játiko...	Grisiea tomentosa.
Jamu	Eugenia jambolana.
Kadambo	Nauclea Cadamba.
Kotá rangá..	Gardenia latifolia.
Kotoku.	Strychnos potatorum.
Koduru	Prosopis spicigera.
Konteyi kulli	Zizyphus.
Kopásia	Kydia calycina.
Karsáu	Ficus ampelos.
Khoiru	Acacia sundra.
Kaloochia.	Diospyros sylvatica.
Kolá sáhája.	See sahaju.
Kendhu.	Diospyros melanoxylon.
Kohkundia	Poivroea Roxburghii.
Kakrá	Gelanium lanceolatum.
Kumbi	Careya arborea.
Kosi	Briedelia retusa.
Kusum	Schleichera trijuga.
Karadá	Cluytia collina.
Korra	Strychnos nux-vomica.
Korunju	Pongamia glabra.
Kocto	Feronia elephantum.
Kulo	Grewia Rothii.
Koniari	See bono koniari.
Lodhoká sidjo	Euphorbia antiquorum.
Máhá nimu	Melia azedarách.
Mukta maya	Sapindus emarginatus.
Manghati	Lawsonia inermis.
Mohulu	Bassia latifolia.
Munda munde	Nauclea parvifolia.
Munigha	Moringa pterygosperma.
Meresingha	—
Mosonea	Ehretia lœvis.
Mohi	Garuga pinnata.
Nirasu	—
Nuniári	Antidesma diandrum.
Nimu	Azadirachta India.
Ohalu	Emblica officinalis.
Purá dhobi...	See dhobi.
Pativa	Randia dumetorum.
Patru kurwau	Holarrhena antidysenterica.
Pal kurwáu	Wrightia tomentosa.
Panásá	Artocarpus integrifolia.
Pamponia	Calosanthes Indica.
Pitla kalochia	See kaloochia.
Pla salu	Pterocarpus marsupium.
Pási	Conocarpus acuminatus.
Pendrá	Randia uliginosa.

Polásu	Butea frondosa.
Patuli	Bignonia suaveolens.
Pisi chandra	Elœodendron Roxburghii.
Puriey kuli	Ficus cunia.
Rai	Dillenia speciosa.
Rain billi	Mallea Rothii.
Salwa	Shorea robusta.
Salorá	Lagerstrœmia parviflora.
Surapatari	Acacia procera.
Sundra gundi	Rottlera tinctoria.
Sundari	Cathartocarpus fistula.
Sohu	Soymida febrifuga.
Sissuś	Dalbergia latifolia.
Seris	Albizzia Lebbek.
Sáhéda	Trophis aspera.
Sahaju	Terminalia tomentosa.
Salopo	Caryota urens.
Tentooli	Tamarindus Indica.
Tellu kurwan	Ixora parviflora.
Telly	Wendlandia tinctoria.
Usto	Ficus religiosa.
P	Hedera obovata.
P	Callicarpa, sp.
P	Murraya exotica.
P	Cassia florida.

(Signed) R. H. BEDDOME, CAPTAIN,

Officiating Conservator of Forests.

CAMP RUSSELCONDAH, *January* 1864.

APPENDIX C.

List of new or rare plants drawn in the office of Conservator of Forests in 1863-64.

Ranunnculaceæ.

Clematis grewiœflora P (or n. sp.)

Anonaceæ.

Atrutegia Thomsonii, (ii. s p.)
Artabotrys Zeylanicus, (h. f. et. T.)

Dipterocarpeæ.

Dipterocarpus Indicus, (n. s p.)
Hopea parviflora, (n. s p.)

Ternstrœmiaceæ.

Newgenus near Haploclathea Pœciloneuron, (Bedd.)

Aurantiaceæ.

Micromelum pubescens, (Bl.) variety.

Guttiferæ.

Xanthochymus pictorius P (Roxb.)
Calophyllum elatum, (n. sp.)

Erythroxyleæ.

Sethia obtusifolia P (Thw.)

Meliaceæ.

Milnea, sp.

Xanthoxylaceæ.

Dipetalum, sp.

Celastraceæ.

Euonymus serratifolius, (n. sp.)

Rhamnaceæ.

Ventilago, (n. sp.) P

Terebinthaceæ.

Glysicarpus racemosus, (Dalz.)

Connaraceæ.

Ronrea santaloides, (W. A.)

Leguminosæ.

Crotalaria striata, (D. C.)
Alysicarpus longifolius, (W. A.)
Do. pubescens, (W.)
Smithia setulosa, (Dalz.)
Desmodium heterophyllum, (D. C.)
Bauhinia Benthamii, (n. sp.)
Dalbergia gardneriana, (Benth)

Myrtaceæ.

Eugenia, sp.

Rhizophoraceæ.

Carallia integerrima, (D. C.)

Rubiaceæ.

Mephitidea truncata, (n. sp.)
Spermacoce. ??
Ixora nigricans, (Wight.)
Hedotis Heynei, (W. A.)
Do. nudicaulis, (W. A.)
Argostemma Courtallense, (Arnt.)
Canthium, sp.

Sapotaceæ.

Bassia Malabarica, (n. sp.)
Dasyanlus, (n. sp.)

Ebenaceæ.

Diospyros. sp:

Symplocæ.

Symplocos acuminata, (n. sp.)

Oleaceæ.

Olea, sp.

Jasminaceæ.

Chondrospermum smilacifolium.

Gentianaceæ.

Exacum macranthum, (Arnt.) ?

Convolvulaceæ.

Erycibœ paniculata, (Roxb.)

Scrophulariaceæ.

Lindenbergia ruderalis, ? ?

Acanthaceæ.

Strobilanthes, sp.
Andrographis, (n. sp.)
Lepidagathis grandiflora, (Dalz.)
Barleria, sp. (Coorg.)
Cryptophragmium latifolium, (Dalz.)

Lauraceæ.

Tetranthera, sp.

Euphorbiaceæ.

Blachia umbellata, (Wedd.)
Trigonostemon nemoralis, (Thw.)
Actephila hexagyna, (n. sp.)
Rottlera, sp.
Glochidion velutinum, (Wight) ?
Chœtocarpus castanocarpus, (Thw.)
Prosorus Indica, (Dalz.)
Mischodon Zeylanicus, (Thw.)

Podostemaceæ.

Dicrœa algœoides, (n. sp.)
Mniopsis bryoides, (n. sp.)

APPENDIX D. *(with plate.)*

Calophyllum elatum (Beddome). Young shoots, panicles, and two outer sepals of calyx; ferruginous, leaves elliptic, acuminate, attenuated at the base, very shining petioles about one inch long, panicles terminal and from the upper axils, large, many flowered. Sepals four, two outer ones sub-rotund small, two inner ones petolied petals 4, fruit ovoid, pointed, about the size of a thrush's egg.

A gigantic tree, common on the western ghats up to 3,500 feet elevation, trunk perfectly straight, and the bark always furnished with longitudinal fissures; yields the Poon Spar of commerce; called in the Anamallays Pongoo—in Malabar Poone or Poon, and in South Canara, Siri Poone.

APPENDIX E. *(with plate.)*

Hopea parviflora. (Beddome) Petioles, panicles, and calyx hoary, leaves short, petioled, glabrous, ovate to oblong, furnished with glands in the axils of the veins beneath; flowers secund, subsessile, numerous, very minute, very sweet scented. Stamens fifteen, alternately single and in pairs. Stigma three cleft.

A gigantic tree. South Canara ghats, called kiral-bogi, height up to 100 feet, circumference 12 feet, leaves 2-2½ inches long and 1½ inches broad. Yields a strong hard timber which is impervious to the attack of white ants.

APPENDIX F.

CAMP ANAMALLAI VILLAGE,
2nd May 1864.

To CAPTAIN R. H. BEDDOME,

Officiating Conservator of Forests.

SIR,

1. I have the honor to submit my Annual Administration Report for the official year ending 1863-64.

2. From circumstances over which the department possessed no control, viz., the serious indisposition

of Captain Michael from inflammation of the lungs, the working season, which generally commences on the 1st of May of each year, was unavoidably postponed to the end of July 1863. On the 9th of that month, I received over charge of the department from Captain Michael at Coimbatore, from whence I proceeded to the Anamalais a couple of days afterwards. Here I remained only a fortnight, when I was directed to proceed to Ponany to re-measure one Chinna Rowthen's planks.

3. On my arrival at Ponany, I expected to find the planks alluded to be so arranged as to facilitate my work, but was sadly disappointed on discovering that only a portion of these planks had as yet reached Ponany, and which few were mixed with a thousand others not regularly stored, but promiscuously thrown into one heap. I also learnt that a number of Chinna Rowthen's planks were then being floated down from Mungarah, and others again in Store at that depôt. To avoid delay I issued instructions for collecting all the planks together, and so arranging them as to obviate inconvenience. I then returned to Paulghaut, where I made the necessary arrangements and advances to axemen for felling timber on the Anamalais, and after satisfying myself that a gang or two had proceeded to the forests, I returned to Toonacuddavoo.

4. After a short stay in the forests, I proceeded again on the duty of re-measuring Chinna Rowthen's planks, when again I was sadly disappointed, as the planks had not yet reached Ponany, but were still floated down. After a short stay, I regret to say, I was compelled to return without measuring the timber, but proceeded again on the 6th March last, and was engaged on the work for nearly 25 days, and submitted my report on the 4th April 1864.

5. Apart from the disadvantage of a portion of the season having run out, the difficulties I had to contend with were very discouraging to one who, from his knowledge of the working of the several forests, had hoped to reap rich results. The head writer, who was employed on this establishment for some years, had been discharged only a day previous to my assuming charge. This circumstance I regretted at the time only because it deprived me of the immediate means of obtaining information with regard to the unadjusted advances to axe and cartmen.

6. During the season under review, a thousand five hundred and odd planks were felled, numbered, and valued, and an equal number carted to the head of the slip. The work might have been far more satisfactory, but in this short period of three months, viz., August, September, and October, there were three Malialum* festivals, each festival lasting for ten days; thus, I may say, we lost one out of the three working months. Besides, the season was very sickly, the department having lost by death the services of an Overseer and Floater, and seventeen others from among the axe and cartmen, as well as followers, and so severe was the attack of the fever, that a robust Lascar who came from the Gun Carriage Manufactory with the Agent appointed to select timber, was seized with the fever and died of it in a few days after his return to Madras.

* The Onum festival.

7. I am glad to state that two she Elephants calved during the year, and both are doing well. Another is expected to calve very shortly. In consequence of the above circumstance, the dragging of planks, &c. has fallen on the remaining three Elephants.

8. It may not be out of place here to mention a few facts illustrative of the peculiar character of these Leviathans of the Indian Forests. The female Elephants do not, like other animals, shew a dislike for the progeny of others of their own kind, but they allow the calves of other female Elephants to take all sorts of liberties with them and even suckle them. On one occasion one of the calves out of mischief got into an opening a hutty of timber, but not being able to turn round or back out so as to find its way back, it cried out, when all the Elephants rushed away from their work, and finding how the little one was situated carefully unpacked the whole heap, and one Elephant, not its own dam, gently lifted it out of its dilemma: one fact seems forcibly to be established by the circumstance of the female Elephants alluded to having calved, namely, that Elephants will breed in captivity if properly cared for. I would respectfully beg to suggest that an experiment be tried at the Anamallais, where there is ample room for the same.

9. In connection with the above subject, I may be permitted to state that these Elephants have been subjected to severe privations in consequence of the whole land up to the foot of the ghaut being

claimed by Ramasawmy Moodelliar, a wealthy ryot of this place. The Tahsildar has certainly allotted about 30 vellums of land on the east, and about 100 vellums on the west along the hills, but the ground assigned is poor and inconveniently situated, as Ramasawmy Moodelliar's land intervenes, and the Elephants, when let loose, trespass into this land. I would therefore, recommend that this land, which has apparently been most injudiciously given away, be resumed by Government, or a compensation offered to the abovementioned individual for the lands belonging to him within half a mile of the foot of the ghaut.

10. *Depôt at Ponany.*—The present depôt having been too limited to hold a large number of planks, and as labor and time were lost when measuring timber, more especially as it is a Cocoanut tope, I have thought it advisable to abandon this spot, and engaged the depôt lately vacated by the Bombay Government. Hitherto, when planks were received into the depôt, for want of sufficient space, they were all thrown into heaps between trees, but I have now directed that all planks should be stacked according to the years in which they were cut, and a board planted opposite each stack to indicate the same, as well as the number of planks in each stack. The present depôt is an open piece of ground nearly three times as large as the late depôt, and consequently the rent is also enhanced, but this will fall far below the advantage that will be derived by maintaining order and regularity.

11. *License System.*—This system is not yet well understood in this District. People still imagine that they have a prescriptive right to fell where they please, for the indiscriminate and injudicious distribution of jungles to applicants has encouraged this felling of late. One has but to ask a ryot with a rag round his waist and an axe on his shoulder where he is proceeding to, and his answer is sure to be *"to my jungles."* I trust, however that during the current year, all illicit felling will be stopped and the revenue augmented. Did I but receive the assistance I anticipated from the under revenue servants, such as Monegars, &c., my labor would be rendered easy, but at present these men are the greatest stumbling-blocks to my carrying out the orders of Government.

12. *Extension of the Forest System.*—The Boleamputty valley has been added to my supervision this year, with one Duffadar and a Peon; these men are doing all in their power to render satisfaction in the execution of their duties, but the remarks in the preceding paragraph, which are applicable to the above place, especially render all attempts at conservancy abortive.

13. I cannot conclude this report without offering a few remarks upon the utilization of the labors of the Forest Department, and rendering them a source of increased revenue to the State. There appears to me, I would respectfully beg to observe, some cause which tends to be prohibitive of sales of the timber felled by the department and of speedy returns being obtained. We have now in the several depôts of this forest, timber stacked, the value of which is represented by the sum of Rupees 2,60,571-0-0, but while this sum stands undiminished in our books, all Public Departments, such as the Public Works Department, Ordnance Department, &c., are allowed to procure their timber from private sources, unmindful that such timber, though bearing the same name, differs vastly in quality. The Burmese Teak, although now plentiful in the market, and cheaper than what is to be obtained from these forests, is brittle in quality, while ours contains the sap and will endure for years. It must be admitted that all departments are quite justified in carrying out their *modus operandi* in the most economical manner possible, yet it must not be lost sight of, that were good timber once used in the erection of a building, either public or private, the gain will be manifold in the long run; for it must be borne in mind, that to replace timber which might be rendered useless in four or five years, the masonry work will also have to be renewed. This argument will also, I have no doubt, stand good in every other branch of public utility. I would therefore respectfully suggest, that all departments of Government requiring timber should send in their Indents to us, and only in the event of such Indents not being met with, should they be allowed to procure timber elsewhere.

14. The Gun Carriage Manufactory purchased from these forests 3,500 cubic feet of selected Teak, but I am not able to shew the transaction with that department as complete, and have therefore been compelled to enter it as a suspense account, in consequence of the Superintendent not being able to grant a receipt for the timber until the whole is delivered at the factory, and which could not be done until the

beginning of the present official year, the timber having been selected only about the latter end of March last.

15. *Financial results.*—The receipts from sale of timber and seignorage amount to as follows :—

	Rs.	A.	P.
Seignorage from Chenat Nair Forests	9,269	13	0
Do. at Boleamputty jungles on trees, and firewood...	175	0	0
Sale of Teak at Ponany	27,272	7	7
Do. rejected Teak	226	12	8
Do. Vengay	266	0	11
Do. Teak at Ponany in 1862-63	1	15	6
Do. Teak to Mr. Bake do.	952	10	6
	38,164	12	2
Due by the Gun Carriage Manufactory for Teak	10,500	0	0
	48,664	12	2

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) T. SPRING,

Acting Assistant Conservator of Forests.

APPENDIX G.

Administration Report of the Wynad Forests for the official year 1863-64.

Financial Statement. During the past year, the expenditure and receipts have been as follows :—

Expenditure.				
Working charges...	13,705	10	10	
Salary of fixed establishment	11,121	5	8	
Total expenditure,...				24,827 0 6
Receipts.				
Realized by sale of timber	18,054	10	9	
Deposit money forfeited...	600	0	0	18,654 10 9
Balance against the forest...				6,172 5 9
Cash balance in hand on the 30th April 1864 ...	272	8	9	
Advances outstanding do. do.	1,941	12	11	2,214 5 8
Total Balance...				2,214 5 8

to be carried to next year's account.

Although Rupees 18,654-10-9 have been realized by sale of timber, there is still, as shown above, a balance of Rupees 6,172-5-9 against the forests. This has been brought about by the immense quantity of timber that was thrown into the market last year, and a portion of this wood from which it has not yet recovered, but it is confidently expressed that in the current official year the forest will more than pay itself. A contract has been already entered into to supply the Railway at Bangalore with 600 logs.

Quantity and estimated value of timber on hand on the 30th April 1864.

Value of timber unaccounted for brought from last year's account					18,678	5	3
Add timber felled during the year ...					26,975	1	9
Do. confiscated					373	1	9
Total					46,026	8	9
Deduct.							
Sold during the year			18,054	10	9		
Destroyed by fire			750	0	0	18,804	10	9
Balance on hand on the 30th April 1864...						27,221	14	0
Particulars.							
2,832	Cubic feet of Teak wood at Untersunta at 10 Annas per cubic foot ...		1,770	0	0		
19,192	Do. do. Baigoor at 10 Annas per cubic foot		11,995	0	0		
8,216	Do. do. Goondray at 8 Annas per cubic foot...		4,108	0	0		
1,907	Do. do. Marbuctumpuram at 8 Annas per cubic foot ...		953	8	0		
21,967	Do. do. in forests at 6 Annas per cubic foot...		8,237	10	0		
54,114	Do.					27,064	2	0
167	Do. do. Black wood at Baigoor at 8 Annas per cubic foot... ...					83	8	0
297	Do. do. Honah and Mutte at Marbuctumpuram at 4 Annas per cubic foot..					74	4	0
	Total value of timber on land...					27,221	14	0

Wood destroyed by fire.

It is to be regretted that so much timber has been destroyed by fire, but it occurred in spite of every exertion to prevent, not so much when the grass was first burnt, but afterwards when the dry leaves, chiefly Bamboos, accumulated, and a second fire passed through the forest.

Outstanding Balance.

The Assistant Conservator hoped that there would have been little, if any, outstanding balances at the end of this year, but in consequence of there being no rain (not even a shower) for four or five months after the regular monsoon had ceased, the annual fires were more general than he has ever seen them before. The whole of the grass was burnt up, and there was none left for the cattle. The Cart Contractors could not therefore carry on their work, and a balance of Rupees 1,018-11-3 remains unadjusted against six of them. With regard to the balance of Rupees 922-9-8 against the Cooroombers, numbering about 50 men, this was chiefly brought about by sickness amongst the subordinates of the establishment; although the Cooroombers work by contract, they are such an idle race, they require as much supervision as if they were on monthly pay; and this, owing to the constant illness from Fever of both Gomastahs and all the Peons, could not be given. The balances outstanding, both against Cartmen and Cooroombers, will no doubt be worked off in the ensuing year, that of the former when the weather permits, and the latter at an early date.

Boundaries.

A small party of the Revenue Settlement Department, under a Native Inspector, has been engaged lately in demarcating the boundaries of the forests and lands claimed by the Trustees of the Pulpully Temple, but as the Assistant Conservator predicted it has suffered terribly from Fever, and been obliged at last to leave the District; this was to be expected at this season of the year. The Assistant Conservator met the Inspector in the forest last month, and was informed by him that he had great difficulty in procuring reliable information regarding the boundaries, all on the spot being interested or influenced by the Trustees; while of his six Goomastahs, one had died and all the others as well as all the Peons had Fever, from which he himself suffered regularly three times a month. The Inspector also stated that a new claimant had sprung up, in a Nair of Poodady Umushum, to the Pambray Forest, hitherto supposed to belong to Government. The Deputy Collector of Wynad has been requested to call upon this Nair for proof of his claim. The Pambray Forest, although not containing much ripe Teak, contains an immense number of fine young trees. The Assistant Conservator has counted as many as 60 fine well grown young trees, of from one to two and a half feet in girth, on an acre, and there are hundreds of such acres, and consequently this forest in 20 or 30 years will be of great value.

Tukkul.

No cases of "Tukkul" have been reported this year, but some Cooroombers were found about to begin in the Koodray Kottah Forest, and held permits to do so, signed by Adigherry of Elloornaud Umushum. The case was reported to the Deputy Collector of Wynaud.

(Signed) W. A. GIB, CAPTAIN,
Assistant Conservator of Forests.

MANNANTODDY, 5*th May* 1864.

APPENDIX H.

Administration Report of the Hoonsoor Forests for the official year 1863-64.

Financial Statement.

During the past year the expenditure and receipts have been as follows :—

Expenditure.

Working charges...	6,039	13	2
Salary of fixed establishment	1,435	7	5
Total expenditure...			7,475 4 7
Receipts.			
Realized by sale of timber...			1,296 4 10
Balance against the forest...			6,178 15 9
Cash balance in hand on the 30th April 1864 ...	1,166	11	8
Advances outstanding	793	7	7
Total Balance...			1,960 2 10

Quantity and estimated value of timber on hand on the 30*th April* 1864.

Value of timber unaccounted for brought from last year's account.			6,140 2 6
Add timber felled during 1863-64... ...			19,436 0 10
Total...			25,576 3 4
Deduct.			
Sold during the year 1863-64			1,296 4 10
*Balance			24,279 14 6

* *Particulars.*

29,954¾	Cubic feet of Teakwood at Baigoor at 10 Annas per cubic foot...	18,721	11	6			
10,895¾	Do. do. in the forest at 8 Annas per cubic foot.	5,447	11	0			
353	Do. of Honah and Muttee at Baigoor at 5 Annas per cubic foot	110	5	0	24,279	14	6
	Total Rupees...				24,279	14	6

The timber at depôt that was valued at 11 Annas per cubic foot last year, is valued at 10 Annas this year, owing to the dull state of the market.

In explanation of the rather large cash balance in hand, it should be stated that last year, 1862-63, the carting was carried on till the end of March, and as it was expected that the same would be done this year, allowance was made for it, and a large amount entered in the last Quarterly Budget Estimate as required for February, that being the month in which it was expected to be most required for advances to cartmen; it turned out that it was not required for that month, but as the cartmen had promised to work in March (which they would have done had rain fallen) it became necessary to draw the money, it being contrary to regulations to draw the money estimated for for one month in the next. As it is impossible always to make a correct estimate from months before the time of how much money will be required, it would be a great convenience if money estimated for in a certain month, but not required during that month might be drawn in the next. Were this permitted, there would be no necessity for having more than 200 or 300 Rupees at one time in the cash chest.

Like the Wynad Establishment, that of Hoonsoor has suffered a good deal from sickness, the Overseer and most of the Natives having had severe attacks of Fever.

(Signed) W. A. GIB, CAPTAIN,
Assistant Conservator of Forests.

MANANTODDY, *5th May* 1864.

APPENDIX I.

Annual Report of the Mudumallai Forest for the official year 1863-64.

Financial Results.—The financial results of the past year are not so satisfactory as the previous year, the receipts only amounting to Rupees 15,287-6-8, including the supply of timber to the Public Works, and the expenditure to Rupees 37,292-7-4, leaving a balance against the Forest of Rupees 22,005-0-8. The explanation of the deficit is as follows:—A sum of Rupees 40,000 was advanced by the Officer of the Lawrence Asylum Works to secure an ample supply of timber for the year, and to meet these requirements 20,092 cubic feet of timber were carted to Ootacamund, and 34,921¼ cubic feet to Seegur.

Shortly before the expiration of the official year, orders were received to refund the money; instead of the forest exhibiting a surplus of Rupees 17,994-15-4, it exhibits a deficit of Rupees 22,005-0-8, but the value of the wood in Store is at the lowest calculation, 22,180-14-0 Rupees more than in the previous year, and if the supervision and extra rent, amounting in the first instance to Rupees 4,800, and the second 1,200, or in all 6,000 Rupees be added, it will be seen that in reality the profits from the forest are much the same as in last year.

The sales of last year amounted to Rupees 62,731-5-0, and timber felled 34,888¼ cubic feet, this year, if the Lawrence Asylum advance is included, they are Rupees 57,613, and 52,730½ cubic feet felled and squared, and this notwithstanding that the market was glutted with timber, owing to the order of Government releasing a quantity of timber that had been detained in Wynad pending investigation of the claims of the cutters.

The estimated sales for the year were calculated at 80,000 Rupees, but the Bangalore and Mysore merchants did not purchase above 7,000 Rupees owing to the above cause, and the Lawrence Asylum has taken but little as yet.

Sale of Junglewood.—The sales of Jungle wood amount to only Rupees 514, owing to the fall in the price of Teak, but this year, as Teak is increased in price, I expect a demand for Jungle wood will arise. In this year the demand for timber will be considerably increased, tenders for the purchase of timber arriving daily.

Separation of Accounts.—I have not separated accounts of Mudumallai Forest and that portion of Wynad worked by me, as up to this all the wood sold has been Mudumallai wood.

Lease of the Forest.—A lease of the forest having been concluded for 99 years, preparations for forming a Teak Plantation, and improving the main roads, with their feeders, have been commenced.

Coorumbers.—Nearly 100 Coorumbers are felling in the forest, and next year the amount felled will be rather more than this year, as we could not commence early this season, owing to the Rajah not having agreed to the terms of the lease until three months after the commencement of the official year.

Cart Contractors.—Murrain has this year been very prevalent, and our operations have been seriously impeded. Notwithstanding the high price we pay for carting, ten Annas a ton a mile, when the charge to Bangalore is only 4 Annas a ton a mile, we have experienced the greatest difficulty in procuring respectable cartmen, and should murrain progress at its present rate, we shall have to take to Traction Engines. If the Railway can carry for one Anna a ton a mile, Traction Engines might carry for three Annas a ton a mile. In the County of Kent above one hundred Traction Engines are employed. The steepest gradient in the Bangalore road is about one in 30, if a new Seegur ghat were made of one in 30 instead of one in ten as at present, the cost of carriage per ton would be reduced from ten Annas a ton a mile to four Annas; for instance, a ton of timber to Bangalore, distance 140 miles, costs 30 Rupees, not quite four Annas a mile, whereas a ton of timber from Mudumallai to Ootacamund costs 22 Rupees for a distance at present of 30 miles, if there was a ghat of one in 30, the distance would be increased to 54 miles, and the charge of four Annas a ton a mile would reduce the carriage to 13-8-0 a ton instead of 22 Rupees as at present.

Supervision.—It has been ruled that the whole cost of my supervision should be charged to this forest; this bears heavily on the results. Last year, by dividing the supervision over Seegur and Mudumallai, the results appeared very favorable, this year the profits of Seegur are swelled at the expense of Mudumallai.

(Signed) H. R. MORGAN, MAJOR,

OOTACAMUND, *19th May* 1864. *In charge of Mudumallai Forests.*

APPENDIX K.

Annual Report of the Seegur Forest for the official year 1863-64.

Financial Results.—The expenditure for the past year has amounted to Rupees 14,046-15-10, and the receipts to Rupees 32,719-10-4, with the stock of Teak, Vengay, and Sandalwood on hand of Rupees 15,985-13-11. The results are much the same as last year, if the supervision, amounting to Rupees 4,800 is charged against the forest.

Sandalwood Plantations.—Large nurseries have been formed, and a few plants have been put out, but great difficulty has been experienced. Rats carried off the seeds from the beds by thousands, white-ants attacked the roots of the young plants, deer and hares eat down those put out, and thus caused them to go back. Various experiments have been tried, such as putting out small plants, sowing seeds in trenches, &c., and the result is, that the only certain method of raising a Plantation is to keep the plants for two years in the nurseries, having lifted them once to cause the growth of lateral roots, and then put them out finally in fair soil. If the soil is too rich, the plant makes plenty of Sap wood but no Heart wood, if too stony and dry, the Heart wood is formed too slowly; it is difficult to hit upon the exact medium.

Felling.—There has been no felling of Teak or other woods with the exception of Sandalwood, and it is carried on by Coorumbers and Sholighurs ; the former were terribly afflicted by Small Pox this year, losing 16 of their small number.

Roads.—A road from Thullamallai to meet the Mysore grand road at Atkoolipoorum has been projected, it would be a great convenience to this department, and would tend to increase the forest revenue if it were finished soon. The road from Hussanoor to the Mysore boundary is in a very bad state, quite unformed and unbridged, whereas, on the Mysore side, the road is properly shaped, drained and bridged ; the contrast is very great, it would tend to open up the forests in this part where there is much Black wood, Vengay, if the road was properly shaped and bridged, so that carts might pass in all weathers.

(Signed) H. R. MORGAN, MAJOR,

OOTACAMUND, 19*th May* 1864. *In charge of Seegur Forest.*

APPENDIX L.

Annual Report of the Neilgherry Sholas for the official year 1863-64.

Financial Results.—The financial results of this year are rather better than those of last year. The expenditure amounting to Rupees 3,642-15-7, and the receipts to Rupees 4,019-3-1, leaving a small profit to Government of Rupees 376-3-6.

Planting.—Large nurseries have been formed and planting has been vigorously carried on ; 23,000 Australian Acacias have been put out in the Sholas cut for firewood, and there seems every prospect, from the rapid growth of the Australian Acacia in good soil, of a fair and continuous supply of firewood being attained.

Trespass and damage to Sholas.—There is still a good deal of damage done to Sholas, and the mild punishment inflicted by the Sub-Magistrate of Ootacamund is not calculated to deter offenders; 12 hours confinement, and such like childish punishment, is not regarded by the Native with any awe, on the contrary, he placidly reposes during the period of his detention, and issues forth to trespass upon Government Sholas with rather an added zest than otherwise. The fact is, the department is any thing but popular, all parties considering it a monstrous imposition that they should be obliged to pay for their firewood.

(Signed) H. R. MORGAN, MAJOR,

In charge of Neilgherry Sholas.

APPENDIX M.

Annual Report of the Wellington Australian Plantation for the official year 1863-64.

Financial Results.—These Plantations exhibit a deficit, as usual, the expenditure being Rupees 2,258-10-9, and the receipts Rupees 154-4-0, leaving a deficiency of Rupees 2,104-6-9.

Growth of the Trees.—The trees have much improved in the last two years, and this year it is calculated that one-half of the supply of firewood for the Barracks and Coonoor can be drawn from the Plantations, besides a large amount of excellent Charcoal, and hundreds of poles for scaffolding for the Lawrence Asylum Works.

Planting.—The planting of 1862-63 in trenches has been very successful, the growth of the plants far exceeding those in pits. I regret to add that the planting of this year does not seem so satisfactory, a good many of the plants are dead, and others do not exhibit such rapid progress as they ought. The causes of partial failure were threefold, first, the plants were too small ; second, they were put out too late, and thirdly, the North East Monsoon was a failure, very little rain having fallen after October, this derangement of the seasons was due to a Typhoon which occurred in October. I have taken such measures this year as will effectually prevent the occurrence of any blunder on the part of the Overseer in charge.

(Signed) H. R. MORGAN, MAJOR,

In charge of Wellington Australian Plantation.

APPENDIX N.

Annual Report of the Bhowani and Collegal Forests for the official year 1863-64.

Financial results.—The financial results appear satisfactory, when it is considered that the working of these jungles was merely experimental. The expenditure amounts to Rupees 2,637-2-1, the receipts to Rupees 6,417-0-0, leaving a profit of Rupees 3,779-13-11.

Roads.—A new road from Bhowani to Collegal is in contemplation, and when this line is completed it is very likely that a demand for Black wood and Vengay, which abounds in some places, will arise.

(Signed) H. R MORGAN, Major,
In charge of Bhowani and Collegal Forests.

Ootacamund, 19*th May* 1864.

APPENDIX O.

Annual Report of the Salem and South Arcot Forests for the year 1863-64.

The progress during the year may be deemed satisfactory. The receipts amounted to Rupees 31,424-0-8, and the expenditure to Rupees 14,250-5-3, leaving a balance in favor of Government of Rupees 17,176-11-5.

In order No. 1,711, Revenue Department, dated 17th September 1863, Government directed the experiment of working the Denkenicottah range of the Forest on the close system to be made; this order reached the Assistant Conservator, Lieutenant Borradaile, when travelling in the South Arcot portion of the Forest, and while on this tour Lieutenant Borradaile was attacked with Fever, which ultimately obliged him to return to Europe on Medical Certificate. To introduce the close system on a good footing and to ensure its being carried out in an economical manner, the presence of the Assistant Conservator would be required for two or three months on the spot, and therefore Lieutenant Borradaile, not liking to entrust the duty to any of his Overseers, fearing that some errors might be made at the commencement which could only afterwards be rectified with much trouble, determined to postpone the alteration of system until in health to carry it out fully. No loss to Government has accrued, for the License system has been allowed to run, and no falling off in the Revenue from that range has occurred.

No satisfactory arrangement for the leasing of the Forests of the Jaghiredars and Mutadars of the District has yet been arrived at. These men are now aware of the value of their Forest land, and are not willing to give it up on reasonable terms. Their mode of working the Forests is so injudicious that ere long the land will be cleared of all really good timber; saplings are felled, and the ultimate ruin of the Forests is not far distant.

South Arcot Range.

The Establishment sanctioned for this Range is one Overseer on Rupees 30 per mensem, the Peons there employed having been drafted from other Ranges of the Salem District. The receipts amount to Rupees 2,316-0-0, the expenditure to Rupees 360.

Sandalwood.—A sale of 2,550 maunds was effected, realising Rupees 9,757-14-0. In the store at Denkenicottah and in the out depôts 1,66,054 lbs. of wood are being prepared, the value thereof may be put down at Rupees 23,200.

(Signed) E HALL,
Acting Sub-Assistant Conservator of Forests.

APPENDIX P

FROM MR J. FERGUSON,

Sub-Assistant Conservator of Forests.

TO CAPTAIN R. H. BEDDOME,

Officiating Conservator of Forests.

SIR,—

I have the honor to forward the Annual Report of the Nelambur Forest for the official year ended 30th April 1864.

The receipts for the year are Rupees 6,691-2-4, showing a decrease over expenditure of Rupees 7,234-2-9.

1863-64.	
Receipts ..... Rupees.	6,691-2-6.
Expenditure ..... „	13,925 5-1.
Difference..... „	7,234-2-9.

This decrease is caused by want of labor during the floating season to bring our saplings and timber in for the early market. When the timber was brought in, the season for export was past, and the Calicut Timber Merchants seemed disinclined to buy and store for next season, or determined to do so only at an immense sacrifice to Government, desiring to prevent, if possible, the successful opening of our depôts here. The subjoined statement shows the actual receipts of 1863-64. It also shews value of stock in the depôts at Calicut, giving an estimated value of Rupees 12,600. There is also felled timber in forest prepared for floating as subjoined; the gross estimated value of which may be taken at 17,481.

There are moreover some 40,000 saplings cut and lying in the forest but not collected, the gross estimated value of which may be reckoned at Rupees 15,000. From the estimated value of the timber the expense of floating, and from that of the saplings the expense of collecting and floating, must be deducted, which may leave an estimated net of Rupees 12,000-0-0 in the first, and Rupees 11,000-0-0 in the second case, or a total net value of timber, &c. in stock, of Rupees 35,600.

No. of Trees.	Particulars of Receipts.	Amount.			Total.			Grand Total.		
16,200	Bamboos	1,193	4	...						
332	Teak logs cleared for fresh planting	3,963	...	...						
16	Black wood, do. do.	204	...	..						
12	Poo Murda, do. do.	112	...	...						
10,000	Saplings, thinnings of Plantations	2,160	...	...						
	Rent of Compound at Manglasherry	8	14	2						
	Sales—Total Rupees	...	...	...	*7,641	2	2			
	Stock in Depôt 1863-64.									
30,000	Saplings	12,000	...	...						
33	Teak logs	600	...	...	12,600	...	...	20,241	2	2
	Stock in Forest 1864-65.									
200	† Teak logs	8,000	...	...						
140	Do. do.	2,800	...	...						
700	Benteak do.	4,900	...	...						
183	Erul do.	1,181	...	...						
200	Poo and Karimurda	600	...	...	17,481	...	...			
	Saplings cut in 1864-65.									
40,000	Saplings	15,000	...	...	15,000	...	...			
								32,481	...	...
	Total							52,722	2	2

The Financial results of the year are not so satisfactory as was expected, but we have had many difficulties to contend with this year.

† Of this sum Rupees 950-2-2 remains to be realized and brought to account in 1864-65.

Opening our depôt being new to the public, was unknown any distance from Calicut, and want of labor to bring our timber into the depôt in time for the early market were no doubt great obstacles to our success, but with the stock of timber on hand, and the expectation of bringing it earlier into the market next season, it is hoped that the deficiency will be made up.

So much has the want of labor been felt—it was with difficulty 40,000 out of 60,000 saplings were contracted for to be delivered early in December 1863, which the Contractor failed to accomplish, and petitioned for extension of time; that being granted, he again failed to complete his contract, and the dilatory manner in which he has all along acted gives every reason to suspect it was designedly done to keep our saplings out of the market.

Plantation operations have been carried on; 71,000 seedlings have been planted out this year. The awful severity of the monsoon made a bad planting season, the river rose to an unusual height (10 feet higher than ever seen by the oldest Natives of the place), overflowing all its banks, sweeping away houses, gardens, and everything moveable, and quite deluging our planting site, converting it into a marsh; for weeks the water remained stagnant on the surface, destroying 40 per cent. of our plants, which were beat up afterwards, but still a number of casualties exist.

The overflowing of the river also floated many thousands of saplings (collected) on its banks carrying them back into the Plantations, causing extra labour, but fortunately none were lost.

Weeding has been prosecuted during the year; the Plantations not done last year and all the others have been done, and a number of them twice; including both weedings, upwards of 2,000 acres have been done this year.

A case of timber robbery occurred at Arunbrakoota Mala Forest (Government land) near Aria Kode, the defaulter released to fell timber, a portion of Jungle Forest (from the Jenmi of Trickaloor Temple) adjoining Arunbrakoota Mala, he (the defaulter) being warned by my Peon stationed there, cut within our boundaries, disputing the same, whereon I inspected the place and finding it a case of trespass referred it to the Sub-Magistrate who took it up, but the result I have not as yet heard. Of the 60,000 saplings reported as saleable, owing to the high price of floatage, 40,000 only were contracted for, 20,000 still remain in the Plantations, they being small will not stand a second monsoon well, and are of little or no value, hence they remain unaccounted for. The timber valuations are not high, so that if markets are steady, we may fully expect to realize the amount entered.

We have no pruning account to shew this year. The best season for pruning is August, September, and October. Labor was not procurable, and other work had to be done in season. I have been much thwarted this year. My establishment has been greatly disorganised by a continual change of writers, almost monthly a new man, consequently their interest was to do as little as possible.

Sickness and Fever is a general cry that deter people from remaining who can get other employment.

Sickness has been so severe that sometimes I have had four and five Peons out of 17, including Duffadars, to look after 40 or 50 coolies, and other duties.

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) J. FERGUSON,

Sub-Assistant Conservator of Forests

APPENDIX Q.

From Mr. E. THOMPSON,

Sub-Assistant Conservator of Forests, South Canara.

To Captain R. H. BEDDOME,

Officiating Conservator of Forests.

Sir,—

I beg to forward my Annual Accounts for the year 1863-64, duly signed by the Collector.

Our works have been considerably increased over that of last year, as the following table shows.

1862-63.				1863-64.			
Seignorage.....	5,764	3	10	Seignorage.....	12,761	15	2
Sale of confiscated timber....	792	4	3	Sale of confiscated timber.....	486	...	8
				Sale of timber cut by the Dept	1,725	10	8
				Sale of contracts for working Sandal oil Stills.....	1,660	15	...
				Sale of Contracts for distilling Catechu.....	3,522	...	...
				Sale of Cardamoms.	162	...	..
Total Rupees...	6,559	8	1	Total Rupees...	20,318	9	6

During the year 1,251 candies of restricted timber, 539 $\frac{1}{4}$ candies of Jungle wood, and 62 Poon spars, have been felled, and three Poon Boats made. The greater part of this timber has been taken out of the jungles and stored on the rivers bank, where it is ready for sale or for floating down to the Coast, which ever may appear to be the most profitable during the current official year, 1864-65.

We have planted 6,000 plants of Teak and 31,231 of Black wood, the whole of which are alive, but do not seem to grow large; however this is a bad time of the year to report on the growth of plants, considering the long dry and hot weather. I do not intend to plant any during this year, as I wish to see how those already set vegetate during the rains.

Our total expenditure on the above works, inclusive of salary of fixed establishment, amounts to Rupees 9,606-5-1, and the total receipt on account of the forest revenue 20,318-9-6, which leaves a balance of Rupees 10,712-4-5 in favor of Government.

The Elephants received from Government in June last have been returned to Cannanore, as they were not strong enough to drag the large timber I am cutting at present.

During the time the Elephants were at work, I have got out all the small logs, and have now hired others for dragging the large ones.

If Government could send three or four strong Elephants, such as would drag a log of from 70 to 80 cubic feet, they would be very useful to me, and I can find work for them throughout the year. Merchants ask a hire as high as Rupees 10 per day for their Elephants, which I consider is a great deal too much, but I cannot get Elephants for less at present.

I beg to remain,

Sir,

Your most obedient servant,

(Signed) E. THOMPSON,

Sub-Assistant Conservator of Forests, South Canara.

Camp Mangalore, 13th May 1864.

APPENDIX R.

CAMP KIRKUMBADDY, 14*th May* 1864.

FROM MR. H. H. YARDE,

Acting Sub-Assistant Conservator of Cuddapah and North Arcot Forests.

TO CAPTAIN R. H. BEDDOME,

Officiating Conservator of Forests.

SIR,—

1 have the honor to submit, for the information of Government, the following report of my operations and Account Current showing the financial transaction of the North Arcot and Cuddapah Forests during the past official year, 1863-64.

2. *North Arcot.*—I assumed charge of the District with that of Cuddapah in July last, and immediately proceeded to inspect the forests in the Chendragherry Taluq of the North Arcot District. The only difficulty I then anticipated was the collision the Forest Department would come into with the "Jungle Conservancy" under the Collector. Since then, other difficulties to mar the efficient working of this portion of my charge have presented themselves in the forests of the Krishnapooram and Kirkumbaddy Polygars. At the onset these impediments combined, I regret to assert, greatly nullified my efforts to check the devastation caused by clandestine felling. But now Government having sanctioned a new set of rules for the Conservancy of Forests in the Madras Presidency, by which clandestine fellers are liable to criminal prosecution for Theft, Mischief, or Trespass, as the case may be, under the Penal Code, evidently has had the desired effect, for I am glad to say that its promulgation has tended much to the discontinuance of this nefarious practice, together with an increase of activity of the departmental subordinates by 50 per cent. of the net profits on the sale of confiscated timber being extended to them for any reliable information that may lead to the confiscation of timber and punishment of the individuals concerned.

3. Kirkumbaddy forms the most convenient junction for all roads leading from Cuddapah, and a portion of the North Arcot District, where the Red Saunders (Pterocarpus Santalinus) abound, and when cartmen passing through are asked to produce their Licences, they are invariably those issued by the Polygars, which renders confiscation unjustifiable. Had I a few more Peons for this District, I would be enabled to exercise a better supervision and prevent this subterfuge by posting them at the cart tracts dividing the Polygar's Forest from ours. The Duffadar and four Peons I have at present for this Taluq would be ample, if their duties were not rendered the more onerous by the different *bye-paths* resorted to by cartmen *at nights* to evade crossing the Kirkumbaddy pass. I am of opinion, that if these two Polygars could be prevailed upon by the Collector of the District to lease their forests, it would be the only means of entirely putting a stop to clandestine felling.

4. The assimilation of the rates of seignorage of the Conservancy under the Collector with what obtains in the Forest Department, has tended in a great measure to harmonize the working of the two departments: but yet irregularities exist, which can only be avoided by the transfer of the entire Chendragherry Taluq to this department.

5. The forests in this Taluq are being denuded with great rapidity, and unless the Government are pleased to favor the above suggestions, the already impoverished forests will disappear, and the Ryots will not only suffer from want of fuel, but it will certainly effect the water supply of the surrounding country.

6. Further, the advantages that will be derived by the whole of the forests being placed under one department is too evident to require comment. Clandestine felling would be entirely stopped, Conservancy, as a matter of course would become easy, and last, though not least of all, the Revenue would be considerably increased.

7. *Sale of Confiscated Timber.*—Large quantities of timber and firewood have been confiscated

and sold during the year under review, realizing in the aggregate Rupees 185-14-3. This item would have been greatly enhanced, had not the system of Auctions been ill understood in most of the villages, and a combination on the part of the attendants not to bid against each other. Hence arises partly the small amount realized by sale of confiscated timber in the District.

8. *Revenue.*—It is pleasing to be able to record, that a small increase in this year's collection has been the result of my exertions in this District, and that the amount monthly collected on seignorage account yields at an average Rupees 200 per month, as per subjoined Memo.

	1862-63.			1863-64.		
Timber	1,012	13	0	1,667	8	0
Firewood...	306	3	9	648	13	0
Bamboos...	54	6	0	70	4	0
Sale of confiscated timber	...	..	...	185	14	3
Rupees.....	1,373	6	9	2,572	7	3

I hope to be able during the next season to put this portion of my labours into a systematical and efficient working order, which have been rendered arduous under the circumstances above recorded.

9. *Cuddapah.*—My predecessor in his Annual Report for 1862-63 having so fully defined the forests of this District, together with their capabilities, has left me nothing more to do in this report, than to review their working during the past year.

10. *Rules of the Department and Rates of Seignorage.*—These forests have been brought into strict surveillance by the present rules, which act well, leaving no avenue open either for fraud or peculation, by strict adherence to the Voucher and License system, which forms a check both on the Forest and Revenue Departments. Licenses are now procurable at Budvail, Sidhout, Roychootee, Pullampett, and Codoor; and tickets in most of the villages in each of the above named Taluqs. Applications for the reduction of seignorage are continued, but as the Railway, which runs through the whole length of the District, has invested its forests with considerable importance, and access to the forest, and facilities for the transportation of timber are easy, I am of opinion that no recommendation for the reduction of seignorage will be considered at present; further, the forested state of these jungles will not admit of it.

11. *Depôts.*—Every convenience to meet the requirements of timber by Public Departments has been afforded by the opening of the Depôts at Baulpilly and Codoor, the latter of which was opened this year, and its utility proved by the frequent demands made by the Railway.

12. *Red Saunder Plantation.*—When I arrived and assumed charge of this District, the season for sowing the Red Saunder seeds had expired, and there being then in the Forest Office a quantity of seed, I was induced to venture a Plantation, only on a small scale, without incurring an expenditure to Government, and on the 30th July last set about five hundred seeds. Out of this number a portion germinated within twenty or twenty-five days, for when I returned to Codoor about the end of August, I observed seventy odd trees in a healthy condition, and others which had sprouted up, dying away fast.

13. I endeavoured much to promote their growth by manuring and loosening the soil around, and notwithstanding all my care and attention, in order to meet the wishes of Government, they withered, together with a good portion that was then in a promising condition.

14. Out of the whole, I much regret to state, that I have only a few trees left, and those too have not an healthy aspect.

15. I have since set, and regret to add without any material success, a large quantity at Baulpilly and Codoor in different ways, allowing myself to be guided by the Natives of the place.

16. These failures can only be attributed to the lateness in the season in which the seeds were put down; the month of June I learn being about the best time for sowing the Red Saunder, and I hope during this season to bring up a good nursery and be able to record a better result in a short time.

17. *Fires.*—The wholesale destruction caused to these valuable forests by this nefarious practice

is enormous, and its abolition appears to be one of exceeding great difficulty. Cowherds can only be suspected, but the cunning which they practice to evade detection, render all our efforts abortive. I have consulted the Tahsildar of Pullampett on the subject, and hope with his assistance, and that of the heads of villages, to be able to cause its gradual discontinuance, the firing being too far apart to allow my limited establishment sufficient scope to guard against it.

18. *Clandestine Felling.*—This practice had hitherto been carried on to a large extent with impunity, and my predecessor's endeavours to check its devastation have not proved futile, and I have much pleasure in stating that I have experienced little or no difficulty in my attempts to quell it entirely, and am confident that within a short time, it will be obsolete, by rigidly enforcing the new rules.

19. *Sale of Confiscated Timber.*—This has not been much during the last year under the circumstances mentioned in the above para. The aggregate amount realized being Rupees 149-8-0, my remarks under this head on the North Arcot Forest is applicable to this District as well.

20. *Firewood.*—The demand for this necessary, so essential to life, is exceedingly great, and the opening of the Railway to Codoor, which is contemplated by the beginning of next month, will tend to its enhancement in consequence of the large supply that will be consumed as fuel by the Locomotives. Thus the demand is daily increasing while the source of supply diminishing, and no immediate steps adopted to keep up the continuance of a supply.

21. The subject of firewood has always been a vexed one and attended with many difficulties. My predecessor in his report for the last official year shows that there *should* be a revenue of 10,000 Rupees under *this* head; and so there *ought* to be, but the inadequacy of the establishment is the only barrier to the attainment of this result. I have but five Peons for each Taluq to guard the various outlets and bye-paths made each dry season in every direction, by cartmen to avoid passing a Tannah, and taking into consideration that their duties render it necessary that they be at their Tannahs at all times both day and night, for the purpose of checking Licenses, passing timber and registering the same, it is too much to expect to be able to devote their attention to the interior of the Taluq, and to exercise a check on the fuel used for the Sugar Cane, Turmeric and Indigo Vats, as well as the forges for smelting Iron Ore, all of which are scattered through the length and breadth of the Taluq.

22. Under this circumstance I placed myself in communication with the Tahsildar of Budvail, in whose Taluq firewood is consumed to an enormous extent, without an adequate return to Government, as to the best means to be adopted to obtain a better revenue under this head, and we have agreed that each vat and forge be taxed by the year, irrespective of the working of the vat or forge, and the quantity of fuel used during the year.

23. In elucidation of this I beg to adduce the following for the consideration of Government. The seignorage collection on firewood in the Budvail Taluq during the official year under review is Rupees 46-8-0, totally incommensurate with the fuel used in the Taluq. There are 232 Indigo Vats alone, and if a yearly tax, say 5 Rupees was levied on each for firewood consumed, we would have a revenue of Rupees 1,160 The same is applicable to the Sugar Cane and Turmeric Vats, but these the Tahsildar suggests might be taxed at 4 Rupees each per year, and the forges for Smelting Iron Ore which are daily in use at 12 Rupees each. I shall be glad if the Government are pleased to favor the above suggestion, and grant its trial for a year, and I can confidently assert, that a much larger revenue than at present will be derived thereby, and rendering an immediate increase of establishment unnecessary.

24. *Charcoal.*—I endeavoured much to instruct Charcoal burners in the more economical mode of preparing this article; but yet they will hold fast to their rude and extravagant mode in its preparation, and it now becomes imperative to insist on the strictest economy in its manufacture.

25. *Memo. of unaccounted Timber.*—This exhibits the balance on hand at the close of the last official year, the quantity added and sold during this, with the balance now on hand. A profit of Rupees 227-7-4 is observable by sale of 614 cubic feet and 7 inches of timber.

26. *Assistance from Revenue Authorities.*—It affords me much pleasure to report that the Tahsildars of Pullampett, Sidhout and Budvail have in every case cheerfully responded to my calls on their assistance, and to their ready co-operation I am much indebted.

27. *Establishment.*—Government in their Proceedings No. 1962, dated the 30th October last, were pleased to sanction a small increase for the Cuddapah Forests. I have every reason to be satisfied with the manner in which the duties have been performed by the whole of my establishment. One of the North Arcot Peons I dismissed for his incapacity and repeated inebriety. Their health on the whole has not been very good. The prevalence of Cholera and Fever from October to December last having prostrated many of them from time to time during those months.

28. *Revenue.*—It is highly gratifying to be able to show at the close of this official year so good a result in regard to the revenue derived by these forests, as will be seen from the subjoined Memo., and it is only necessary to state that I have had much to contend against towards the attainment of so large a collection.

	1862-63.			1863-64.		
Timber	8,970	15	8	19,428	2	9
Firewood	420	4	0	1,017	9	6
Palmira	22	0	0	4	0	0
Bamboos	61	13	8	163	13	9
Charcoal	25	4	0	206	2	0
Sale of confiscated timber	1,227	13	0	149	8	0
Sale of timber from depot	...	...	...	682	6	0
	10,721	2	4	21,651	10	0

29. *Financial Results.*—In conclusion I beg to subjoin an Abstract Statement shewing the financial results of both the Cuddapah and North Arcot Forests.

CUDDAPAH DISTRICT.

Receipts.

Sales and seignorage on timber, &c.		21,651	10 0
Value of timber in Store		1,811	5 4
Rupees...		23,462	15 4

Disbursements.

Fixed Establishment	3,280 7 8		
Working charges	2,279 13 1		
		5,560	4 9
In favor of Government Rupees...		17,902	10 7

NORTH ARCOT.

Receipts.

Sales and seignorage on timbers, &c.		2,572	7 8

Disbursements.

Fixed Establishment		528	0 0
In favor of Government Rupees...		2,044	7 8

Cuddapah		17,902	10 7
North Arcot		2,044	7 8
Total Rupees...		19,947	1 10

I have the honor to be,
Sir,
Your most obedient servant,
(Signed) H. M. YARDE,
Sub-Assistant Conservator of Forests.

APPENDIX S.

NUNDIAL,
12th May 1864.

From MR. J. J. LENNON,

Sub-Assistant Conservator of Forests, Kurnool District.

To CAPTAIN R. H. BEDDOME,

Officiating Conservator of Forests.

SIR,

I have the honor to forward my Annual Report for 1863-64.

The past season has been one very favorable for forest operations, inasmuch as little or no sickness has been experienced by the wood-cutters and merchants, and also the cattle engaged in dragging out timber, though the latter had suffered much in the Taluqs adjoining the Nalla Mullais in the low-lands.

The Conservancy rules have had the desired effect to a great extent in preventing clandestine felling and in protecting the saplings and young trees of the "reserved" kinds—this is accounted for by a rigid enforcement of confiscation, when parties have been detected smuggling or felling and removing timber in breach and disregard of the rules.

The small establishment at my command has invariably brought all smuggling to notice. The village authorities, generally speaking, have rendered little or no help in bringing the same to notice to the superior revenue authorities or the Conservancy department. If the Village authorities rendered the assistance which had been required of them through the Deputy Collectors in charge of the Taluqs, smuggling would have entirely ceased. The Deputy Collectors have always punished the Village Officers when their wilful neglect could have been brought home to them. It is a voluntary assistance which has been much felt throughout the season, and without which the hands of the small establishment were almost tied. With the extra establishment lately sanctioned by the Government, I hope to be able to prevent smuggling entirely.

In my previous Annual Report I remarked on the large quantity of Charcoal being drawn away from the Nalla Mullais as also the Yerra Mullais; this still continues and is daily increasing in demand. The price of Charcoal has increased about 50 per cent., which I attribute 1st to increase of wages, and 2ndly to the scarcity of timber in the lower parts of the hills. The Charcoal burners have to penetrate the hills and procure timber which can now only be had on the ridges and places difficult to reach. The above remarks apply particularly to the Yerra Mullais. These hills have been resorted to in great numbers by the ryots of the district for agricultural timber during the past season.

During the season I had several times visited the forests, and my particular attention was given to the North near Venkatapooram—these forests furnishing all the timber required for the Kurnool market; several large confiscations have been made here. All auctions have been conducted personally, and on the whole, timber realized good prices throughout the District.

The quantity of timber and bamboos carried out of the Nalla Mullais free of tax for agricultural purposes have been great, the principal drawback which the ryots experience from the Conservancy rules is not being allowed to cut the "reserved timbers," viz., Chiriman (Conocarpus latifolius) Nalla Maddi (Terminalia tomentosa), and Billoo (Chloroxylon swietenia), of small dimensions, or when only a sapling of four to six inches in diameter. The prohibition is greatly felt and timber from the unreserved list substituted. The total number of Licenses free of tax issued by the Conservancy department have been only 78 (or 291 bandy loads in the proportion of two of bamboos to one of timber, that issued by the several Tahsildars cannot be ascertained, neither can a data be given.

There has been quarterly sales of all confiscated timber which realized Rupees 5,108-1-1 exclusive of the amount paid to informers. There is still outstanding on account of auctions Rupees 158-15-11, which has yet to be carried to credit—owing to the lateness of the last auction this sum has not been credited in the Collector's accounts and therefore stands as an item to be adjusted hereafter.

The financial results have been as follows:—

Amount received on account of seignorage			32,383 11 10
Do. do. by sales of confiscated timber			4,949 1 2
Total Rupees...			37,287 13 0
Deduct.			
Fixed establishment	3,043 5 2		
Working charges	377 7 2		
			3,420 12 4
Net profit...			33,867 0 8
Add timber sold but not credited...			158 15 11
Do. do. in depôts			1,500 0 0
Balance in favor of Government...			35,526 0 7

(Signed) J. J. LENNON,

Sub-Assistant Conservator of Kurnool Forests.

APPENDIX T.

OVERSEER'S OFFICE; CAMP PARIAKULAM,
1*st May* 1864.

From MR. E. SPERSCHNEIDER,
Overseer in charge of Madura Forests.

To CAPTAIN R. H. BEDDOME,
Officiating Conservator of Forests.

SIR,

Forests visited.—I have the honor to submit my fourth Annual Report for the official year 1863-64. During the year I visited the Kambam Forests seven times and travelled through the most wooded parts along the chain of Ghats that separate Madura from Travancore. I twice traversed the forests on the Shurly plateau, which are eminently suited for coffee cultivation, and the forests on the slopes that contain very valuable Vengay. Twice I proceeded to the lower Palnies, with the twofold object of inspecting and having boundary disputes settled. On more than two occasions visited the Poolathoor Sandalwood jungles and the Paula Mallay forests. I also made a circuit of the Upper Palnies and visited the Palny Forests once in two months, being altogether seven months absent from Pariyakolam, my Head Quarters.

Summary of operations.—The rules for the Conservancy of the Madura Forests which were brought into force more than a year ago, operate well, and have been strictly enforced. The seignorage money is paid into the Taluq Treasuries, and the printed licenses I grant correspond in number to the Tasildar's printed and numbered voucher, thus causing a check of the forests on the Revenue and the Revenue on the Forest Department. It is complained the rates of seignorage are much too high, and the conditions of the rules are far too severe as respects the quantity and quality of the wood, and the time allowed for felling and removing the same. This cannot be doubled, the seignorage as compared with the last year's results has materially fallen off during the year, and probably may continue so for another year; but this should not be considered as loss, as the preservation of forests by enforcing the rules for some years to come, being absolutely necessary, it is hoped prove eventually prospective gain. I was obliged to curtail the working of the Kambam Forests, and the sanctioned amount was therefore left undrawn at the close of the year, partly because there was no great demand for wood; the little demand that existed in the Madura market was supplied from the Zemindary forests and the Tinnevelly Hills and from our

own forests on the Palny side. It seemed to me advisable not to sink any more Government money in felling and storing more wood in depôt, as there was no immediate profit accruing from it, at least until the last supply of wood in depôt was fairly sold, and partly because I had to encounter great difficulty, not only from the axemen falling sick with fever in the forests, but also from their fraudulent behaviour in receiving advances and running off to the Travancore Hills in search of Cardamoms. I beg to observe that as long as the Cardamom monopoly stands low in Travancore Forest, operations will be hindered vastly; the price of Cardamoms has risen very high, and the temptation to smuggle is too strong to resist for natives, so much so that in the months of December, January, and February, when Cardamoms are picked, the best working season in the forests, not a single axeman is procurable in the whole of the Kambam valley.

Financial Results.—The following are the results for the year under review:—

Expenditure.

Pay of establishment	2,723	8	0
Working charges	1,718	3	10
Total... ...	4,441	11	10

Proceeds.

Seignorage from April 1863 to the end of March 1864 ...	2,868	4	6
Sale of wood	319	6	0
Total...	3,187	10	6
Excess of expenditure over receipts	1,254	1	4

Though there has been no actual profits for the year yet, if the large amount of 7,733½ cubic feet, valued at 3,866-11-0, Rupees, of timber cut during the year and the year previous but not sold is taken to account, the financial results are very favourable. The timber in depôt when offered for sale to the public, was not sold, as the demand was not great, and the price offered was below the market rate, I thought it better to show no sales, than to close with a disadvantageous rate.

Conservancy attended to.—Innumerable young Teak trees have been protected from fire and creepers in the South East corner of the Kambam valley, which in a few years more will become the finest Teak Forest in this District. The Poolathoor Sandalwood jungles are improving. A site has been selected at Kodaikanul, with the permission of the Collector, to raise an Acacia plantation; the spot is well protected from the South West monsoon, and has a good road passing through it. Owing to a six months drought and its inevitable consequence forest conflagration has been of frequent occurrence. The largest trees as well as saplings are scorched and mutilated, and the smaller seedlings perish; these devastations are caused in two ways, the burning of the grass by the hill people, in order that the ashes of the under growth may nourish the roots of young grass and thus improve the forage of their cattle, secondly, the unextinguished fire of the camps of Saluppa Chetties and Mussulman Labbays who carry on extensive traffic in hill products to the plains and *vice versâ*. I frequently found this to be the case all over the Palnies, I would suggest, therefore, that a notice be issued through the Collector forbidding the burning of the grass in the slopes of the Pulnies and in the proximity of forests. The burning of the short grass on the plateau for improving forage ought to be permitted to a certain extent.

Establishment.—Upon the whole I am happy to say the health of the establishment has been good during the year. My subordinates have had very arduous duties to perform in the jungles. The Kambam forests are peculiarly feverish, and I have lost a Maistry by fever. I also had several attacks of fever during the months of May and August, I was therefore obliged to run up occasionally to Kodaikanul, our Sanitarium, in search of health. A lonely residence in unhealthy forests, the difficulty of obtaining provisions, and the small amount of salary paid to my subordinates, deter many from joining my establishment, so that vacancies can hardly be filled up.

I have the honor to be,
Sir,
Your most obedient Servant,
(Signed) E. SPERSCHNEIDER,
Forest Overseer.

Financial Results of Forest Conservancy Department for 1863-64.

Names of Forests.	Receipts by sale of timber, &c.	Disbursements including the cost of establishment and contingencies.	Balance in favor of Government.	Excess of Expenditure over Receipts.	Estimated value of timber stored in Depôts.	Remarks.
Anamallay	* 28,719 15 2	37,278 1 3	886 11 0	... ...	* 2,83,047 0 1	* Of this Teak to the value of Rs. 10,500 has been sold to the Gun-Carriage, but as it has not yet been delivered at Madras, it has not been paid for.
Chenat Nair forest	9,269 13 0					
Bolamputty	175 0 0					
Madumallai	15,287 6 5	37,292 7 4	... ...	22,005 0 11	1,43,304 1 0	
Sigur	32,719 10 4	14,046 15 10	18,672 10 6	... ...	15,985 13 11	
Neilgherries	4,019 3 1	3,642 15 7	376 3 6	... ...	... ...	
Australian Plantation ...	154 4 0	3,258 10 9	... ...	2,104 6 9	... ...	
Bhowany and Collegal... ...	6,417 0 0	2,637 2 1	3,779 13 11	... ...	... ...	
Wynad	18,654 10 9	24,627 0 6	... ...	6,172 5 9	27,221 14 0	
Hunsoor	1,296 4 10	7,475 4 7	... ...	6,178 15 9	24,379 14 6	* In addition to this, timber to the value of 950 Rupees has been sold, but the amount not credited in the Accounts for 1863-64.
Nellambûr... ...	6,691 2 4	13,925 5 1	... ...	7,234 2 9	* 35,600 0 0	
Madura	3,137 10 6	4,441 11 10	... ...	1,254 1 4	3,886 10 10	
South Canara... ...	20,318 9 6	9,606 5 1	10,712 4 5	... ...	18,878 4 0	
Salem...	31,424 0 8	14,250 5 3	17,173 11 5	... ...	23,200 0 0	
South Arcot... ...	2,316 0 0	360 0 0	1,956 0 0	... ...	... ...	
North Arcot... ...	2,573 7 3	528 0 0	2,044 7 3	... ...	... ...	
Cuddapah	21,651 10 0	5,560 4 9	16,091 5 3	... ...	1,811 5 4	
Kurnool	37,287 18 0	3,420 12 4	33,867 0 8	... ...	1,655 15 11	
Gumsur and Surada... ...	1,479 9 6	1,367 11 1	111 14 5	... ...	... ...	
Total...	2,43,642 2 4	1,82,919 1 3	1,05,672 2 4	44,949 1 3	5,78,873 15 7	Timber on hand on the 30th April 1864.
Deduct general charges.					4,82,361 9 0	Deduct estimated value of timber on hand on the 30th April 1863.
Pay of the Conservator of Forest's Office Establishment, travelling and contingent charges, &c.		21,384 1 8				
Excess of Expenditure over Receipts		44,949 1 3	66,333 2 11		96,512 6 7	Excess of timber obtained during the year.
Actual profit to Government			39,338 15 5			
Add excess of timber on hand on the 30th of April 1864 to that of 30th April 1863.			96,512 6 7			
Financial result for 1863-64...			1,35,851 6 0			

N. B.—Of this amount Rs. 27,272-7-7 paid into the Treasury of the Collector of Malabar on the 29th March 1864, on account of Timber sold at Ponnany Depôt did not reach the Collector of Coimbatur before the 3rd May, and has therefore not been carried in his Accounts for 1863-64.

REPORT

OF THE

CONSERVATOR OF FORESTS,

FOR THE

OFFICIAL YEAR

1864-65.

MADRAS:

PRINTED AT THE UNITED SCOTTISH PRESS, BY GRAVES, COOKSON AND CO.

1865.

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A. Report on Tinnevelly.

B. List of new and rare plants figured in the Office of Conservator of Forests in 1864-65.

C Description of "Dipterocarpus Indicus" Bedd with plate

D. Cuddapah and North Arcot Forest Report.

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CAMP OOTACAMUND, 1st *May* 1865.

From CAPTAIN R. H. BEDDOME,

Officiating Conservator of Forests.

To W. HUDLESTON, ESQ.,

Acting Secretary to Government, Revenue Department,

Fort Saint George.

SIR,

1. I have the honor to forward my Annual Report for 1864-65 of the forests under my charge.

2. In June I visited the Anamallays, and during July and August the forests of Madura and Tinnevelly; in October I visited the Nellumbúr plantations and forests, and in November Mudumallay and Seegur. In December I again visited the Anamallays and the Chenât Nair forests near Palghat. In January I visited Cuddapah and Kurnool and had intended visiting the Nellore district, but I was quite prostrated from a severe attack of jungle fever contracted in the Cuddapah forests. On the 1st of March, Dr. Cleghorn, the Conservator returned from special duty on which he has been absent for 3 years in the Punjab, and resumed charge of the office in which he remained till the end of the official year when he proceeded to England on private affairs.

3. GOOMSUR AND SURADA.—A Mr. Guiezelar, who was formerly employed in the forests of the Travancore Government, and who had high testimonials was appointed early in the official year to the charge of this range, by G. O. No. 670 of the 27th of March. He was removed from office on account of insubordinate conduct towards the Collector, and Captain Marshall the Assistant Agent was placed in temporary charge of the office—a Mr. McCally has just been nominated to the charge at the recommendation of the Collector.

4. *Operations*.—One thousand logs of Sâl have been felled and a portion of them have been brought down to the Coast and arrangements have been made to store the whole at Gopalpore to await transport to Madras, as the advances drawn for these operations have not yet been adjusted, it is necessary to treat them as an outstanding subject to adjustment in the accounts of the coming official year.

5. *Extent to which the Sâl forests should be worked.*—The Executive Engineer in charge of the Ganjam range reports most highly upon the value of Sâl timber, and there can be no doubt that it is one of the most valuable woods of the Presidency, and for some purposes quite unrivalled, there is however some difficulty about transport to Madras, as very high rates are asked. When the 1,000 logs already felled have been brought down to Madras, Government will be better able to judge to what extent it is desirable to work these forests.

6. *Revenue satisfactory.*—The revenue for the year is the seignorage collections under the Voucher and Licence system and contrasts favorably with that shown in the return for the preceding year.

7. *Financial results.*

Receipts.

3,412 cubic feet of timber supplied to D. P. W.	1,021 14 11		
Seignorage on do. do. to do.	1,877 10 0		
Sale of 22 logs supplied to do.	90 12 0		
		2,990	4 11
Seignorage collections on timber...	2,742 14 6		
Do. do. firewood	214 8 5		
Do. do. bamboos	49 5 7		
Do. do. charcoal	13 7 4		
Sale of confiscated timber and miscellaneous receipts.	435 15 0		
		3,456	2 10
Total Rupees...		6,446	7 9

Expenditure.

Establishment.	1,747 0 10
Balance in favor of forest	4,699 6 11

8. *Cuddapah and North Arcot.*—Mr. Yarde has remained in charge of these forests during the year and has been very zealous in the performance of his duties.

9. *Increase to Establishment.*—In October 1864, the chief forests of the Vellore and Polúr taluqs were placed under the supervision of the officer of this range, and the following establishment sanctioned* for their Conservancy.

* Vide G. O. No. 1916 of the 19th October 1864.

	Rs. per mensem.
1 Overseer	60 0 0
1 Duffadar	15 0 0
8 Peons at 6	48 0 0
	123 0 0

The revenue derived from these taluqs fully authorizes this establishment as the following will show :—

Revenue for taluqs of Vellore and Polur.

December.	January.	February.	March.	April.
231	298 3 0	272 6 0	569 1 6	445 5 6

On the 30th of March 1865, the forests of the Dhoor taluq were handed over to our department, and an establishment as follows sanctioned ;—

	Rs. per mensem.
1 Duffadar...	15 0 0
4 Peons at 6	24 0 0
	39 0 0

By this latter arrangement our Cuddapah and Kurnool Establishments join each other and clandestine felling is more easily checked.

10. *Depôts.*—These are working well, a considerable quantity of timber has been supplied from them during the year to Government Departments and the Railway.

11. *Valuable forest still under Revenue authorities.*—Both in the Vellore and Polúr taluqs and in the taluq of Chendragherry a certain portion of (timber) forest still remains under the "Jungle Conservancy Department." This Mr. Yarde reports renders Conservancy difficult and gives an opening for smuggling. I should recommend that all timber yielding forest should be placed under the Forest Department, and that only the scrub jungle should remain under the Revenue authorities.

12. *Clandestine felling.*—Smuggling has been kept in check, as the rules of the department have been strictly enforced.

13. *Planting.*—400 Red Sanders (Pterocarpus santalinus) saplings have been planted out from the nursery and are thriving. At Balpilly a fenced in plantation has been formed, and 800

plants of Nalla maddi (Terminalia tomentosa) have been planted out, besides some wild Mango trees. Tuma (Acacia arabica) has been planted out in portions of the forest where much felling has been carried on. The extreme dryness and great heat of the climate of this district will always render planting precarious and expensive.

14. *Financial results.*

CUDDAPAH.

Expenditure.

Establishment	3,600 0 0		
Working charges	3,194 10 4	6,794 10	4

Receipts.

Seignorage and sale of timber from Depôts ...		29,163 14	2
Balance in favor of forest		22,369 3	10
Value of timber on hand 30th April 1864...	1,811 5 4		
Add felled during 1864-65	2,724 0 0		
	4,535 5 4		
Deduct sold during the year... ...	2,839 13 4		
	1,695 8 0		
Deduct deficiency in stock of timber		115 13	4
Financial return for 1864-65		22,253 6	6

NORTH ARCOT.

Expenditure.

Establishment...		1,052 12	8

Receipts.

Seignorage, &c		4,238 0	0
Balance in favor of forest		3,185 3	4

15. KURNOOL.—*Mr. Sheffield appointed Sub-Assistant Conservator.*—Mr. Lennon having been removed from the department on account of a transaction that occurred in the Anamallay forest when he was Head Overseer. Mr. Sheffield was appointed to the charge of this range and entered in his duties in November.

16. *Planting would not be remunerative.*—Besides the enormous area of valuable forests on the Nallay Mallays (about 2,000 square miles) there are very large tracts of firewood jungles in this District; it does not therefore appear advisable to go to any expense in planting—due attention to the Conservancy of saplings is all that is required.

17. *Increase to the Establishment and alteration in the Seignorage rates.*—In the Conservator's last Report upon this District recorded in G. O. No. 351 of the 17th of February, he pointed that a small increase in the Seignorage rates was desirable—this Report is now before the Board of Revenue, but final orders have not yet been passed on it.

18. *The Revenue authorizes a regular working Establishment.*—Mr. Sheffield in his Report recommends a more systematic working of these forests. To introduce this system, a large outlay would be necessary at the commencement, roads must be opened into the interior of the mountains, and a large purchase of plant (Elephants, &c.) would be necessary—it would certainly

pay in the end and the Revenue authorizes it. This year the receipts amount to 39,482 Rupees last year they were 37,287 and the year before 17,287.

19. *Charcoal Tax.*—Mr. Sheffield mentions in his Report an enormous quantity of timber is annually felled for charcoal without the payment of any tax—the Collector has always hitherto been opposed to any such tax. Government has lately recorded their opinion that timber cut for charcoal should be taxed, and a small tax has been proposed in the Conservator's last Report on this District (now under review of the Board.)

20 *Sandalwood discovered.*—A tract of Sandalwood has been discovered at the extreme north of the Nallay Mallay range, the wood is not nearly so powerfully scented as that of Coimbatore and Mysore, and it is doubtful whether it will turn out to be of much value—it appears to be the species described by Dr. Roxburgh as "Santalum myrtifolium," and found by him on the Circar Mountains—it is however only a variety of the "Santalum album."

21. *Depôt.*—A depôt has been opened for the sale of timber to Government Departments and the Railway and Irrigation Companies.

22. *Financial results.*—The receipts for the year are Rupees 39,482-6-0 against 37,287-13-0 for 1863-64, and the expenditure is 4,903-7-10 against 3,420-12-4.

The particulars are as follows:—

Expenditure.

Cost of establishment	3,800	15	0
Working charge	1,102	8	10
Total ...	4,903	7	10

Receipts.

Seignorage and sale of timber from depôt for May 1864,	2,765	12	0
Do. do. June,	1,155	8	0
Do. do. July,	1,185	9	0
Do. do. August,	1,480	10	0
Do. do. September,	891	0	0
Do. do. October,	1,814	0	0
Do. do. November,	2,578	8	0
Do. do. December,	2,610	3	0
Do. do. January,	3,650	1	0
Do. do. February,	5,495	0	0
Do. do. March,	4,852	10	0
Do. do. April,	7,452	2	0
Sale of confiscated timber...	3,551	6	11
	39,482	6	0
Deduct expenditure	4,903	7	10
Balance in favor of Government	34,578	14	2
Add value of timber in depôt on 30th April 1865...	202	7	0
Financial result for 1864-65	34,781	5	2

23. SALEM.—*Change in superintendence.*—Mr. Hall, Sub-Assistant Conservator who was acting in charge of this Range for Lieutenant Borradaile resigned of his own will, and Mr. Spring was put in to act. In March last, Mr. Spring's attendance being subsequently required in the Coimbatore District, the Deputy Collector took charge of the Range for a few days, pending the

arrival of Lieutenant Walker who has now been nominated to act. Mr. Hall was very attentive to his duties whilst in charge, and the Revenue for the year has been very favorable.

24. *Financial results.*

Expenditure...	8,819	11	0
Receipts	40,306	6	4
Balance in favor of forest. ...	31,486	11	4
Value of timber on hand 30th April 1864.	23,200	0	0
Add felled during 1864-65 ...	1,000	0	0
Total...	24,200	0	0
Deduct sold during 1864-65. ...	13,068	0	0
Value of timber on hand on 30th April 1865.	11,132	0	0

25. SOUTH ARCOT.—The seignorage collections of South Arcot forests adjoining the Salem District amount to Rupees 4,195-11-0, and the expenditure to Rupees 308-5-7, which shows a balance of Rupees 3,887-5-5 in favor of Government which is satisfactory.

26. MADURA.—*Change of Overseer.*—Mr. Turnbull was appointed to the charge of this Range in March. Mr. Sperschneider having been removed on account of great inattention to his official duties.

27. *Revenue of the District very small.*—Large tracts of forest in this District are in the hands of private individuals, and these being worked out regardless of any Conservancy, our seignorage collections are consequently very small—these private forests must rapidly disappear whilst the Government tracts are being conserved and annually increasing in value. The Revenue for the official year however more than covers the expenditure and the deficit of last year—this is chiefly owing to our having sold most of the timber felled by the department.

28. *Planting.*—A considerable sum has been expended in forming plantations of Australian trees on the Pulney Hills.

29. *Felling operations.*—The department has not felled any timber during the year, as there was a considerable stock on hand and a very small demand—this stock has now been nearly all sold and a demand being expected, felling operations will be carried on during the coming season.

30. *Financial results.*

Expenditure.

Establishment	2,486	0	0
Working charges...	992	0	4
Total...	3,478	0	4

Receipts.

Seignorage and sale of timber			6,382	11 2
Balance in favor of forest			2,904	10 10
Value of timber on hand 30th April 1864.	3,386	10 10		
Add felled during 1864-65.				
Deduct sold during 1864-65...	4,232	11 6		
The timber has increased in value as it has been carted. Balance on hand 30th April 1865.	4,478	0 0		
Surplus value of timber			1,091	5 2
Financial return for 1864-65.			3,996	0 0

31. *Anamallay.*—Major Michael resumed charge of this Range in March, his health however not being equal to a forest life, he resigned the appointment at the end of the official year, and Lieutenant Bennet has since been appointed Assistant Conservator. Mr. Spring was in charge of the Range until relieved by Major Michael in March.

32. *Operations.*—Timber to the value of 45,770 Rupees was felled during the year, and a large amount was spent in carting and slipping timber. The returns show a deficiency of Rs. 24,579-9-5, but a considerable amount of timber has been taken by the Gun Carriage Manufactory, which cannot be shewn in the returns as receipts have not yet been granted for it. The cause of the deficit is attributable to the failure of our auction sales, the demand for teak of the Anamallay scantling being very small at present. The market rates of Anamallay Teak have fallen greatly since the Bombay Dockyard has been given up, and the Teak does not fetch the price it was estimated at—the returns calculating the value of timber on hand have always been calculated at the old rates and are probably much too high.

33. *Large Teak trees reported to be scarce.*—Mr. Spring reports that nearly all the large Teak has been worked out except in inaccessible parts of the forests; owing to the dense growth and impenetrable nature of the underwood of these forests, it is no easy task to make an estimate of what they contain during the working season; (*i. e.* the rains) the Assistant Conservator was ordered to make a survey with his Overseers during the dry season after the fires when the forests are comparatively clear—this was not carried out, as Major Michael was ill and his Overseers were laid up with fever. The Conservator had intended proceeding himself on this duty, but he was also prostrated with jungle fever. Blackwood, Vengay and other valuable timbers can be worked during the ensuing season.

34. *Financial returns.*

Expenditure	31,171	1	4
Receipts	22,020	2	7
Deficit against the forest.	9,150	14	9
Value of timber on hand 30th April 1864..	2,83,047	0	1
Add felled during 1864-65...	45,611	8	2
	3,28,658	8	3
Deduct sold during 1864-65...	15,050	6	4
Value of timber on hand 30th April 1865...	3,13,608	1	11
Surplus stock for the year	30,561	1	10
Deduct deficit against forest...	9,150	14	9
Return to 1864-65	21,410	3	1

35. CHENAT NAIR.—The working of the jungle timbers (Teak and Blackwood being reserved) has been carried on to a small extent by the Railway Company. Rs. 1,310 have been paid as seignorage. Expenditure *nil.*

36. BOLUMPUTTY.—These forests are under the license system and show receipts amounting to 935-4-0 with an expenditure of 208-0-0. Mr. Spring, the Acting Assistant Conservator in charge neglected to give the superintendence necessary, and took upon himself to grant licences for Teak without even a reference to the Conservator, he has been suspended pending enquiry. These forests are now under Lieutenant Bennet—it will probably be advantageous to abolish the voucher and licence system and for the department to work them periodically.

37. MUDUMALLAY.—*Operations for the year.*—92,442¼ cubic feet of Teak have been felled during the year, which is sufficient to meet the demand for two years—it was expedient however to take advantage of felling labor when procurable.

38. *Want of Contract Law.*—Major Morgan, the Assistant Conservator complains very much of the want of some Contract Law.

39. *Sales of Timber much less than estimated.*—Owing to the Mysore Government having levied a tax of 3 Rupees per cart load upon timber entering their dominions, merchants refused to take the timber they had previously indented for.

40. *Planting.*—Large nurseries have been formed, and about 5,000 Teak Saplings have been planted out, and they show rapid growth.

41. *Financial results.*

Expenditure			43,854 12 0
Receipts.—Timber sold ...	48,175 5 3		
	202 1 1		48,847 2 6
Plant sold	469 12 2		
Balance in favor of forest			4,992 6 6
Balance of timber on hand 30th April 1864. ...	1,43,304 1 0		
Add cut during 1864-65...	75,155 10 3		
	2,18,459 11 3		
Deduct sold in 1864-65...	48,175 5 3		
Balance of timber on hand 30th April 1865. ...	1,70,284 6 0		
Surplus stock obtained during 1864-1865... ...	... ...		26,980 5 0
Financial results for 1864-65...	... ...		31,972 11 6

By these returns it will be seen that there is a balance in favor of the forest of Rs. 4,992-6-6, and a surplus stock of timber valued at Rs. 26,980-5-0.

42. Seegoor.—*Operations.*—The felling operations have been confined to Sandalwood. The value of Sandalwood felled during the year amounts to Rs. 32,394-6-4.

43. *Planting.*—The Sandalwood nurseries are in a thriving state, but great difficulties attend the planting out: 8 acres have been cleared and many thousand young plants are ready to be put out; Sandalwood planting is only an experiment as yet, but Major Morgan is giving great attention to it, if it is found to answer. Large plantations of this most valuable timber should certainly be formed (it sells at 4 Rs. per maund) and one or two skilled gardeners should be got out from England to superintend the plantations.

44. *Financial result.*

Expenditure...			7,524 9 0
Receipts.			27,843 11 6
Balance in favor of forest			20,319 2 6
Balance of timber on hand, 30th April 1864 ...	15,985 13 11		
Add cut during 1864-1865	32,394 6 4		
	48,380 4 3		
Deduct sold during 1864-1865	27,834 11 6		
Balance on hand 30th April 1865	20,545 8 9		

45. Nilgiri Sholas.—*Planting.*—Planting has been carried on successfully in Sholas previously felled for firewood, and a new nursery has been formed for firewood yielding Australian trees.

46. *Building timber plantation and nursery.*—A Shola close to Ootacamund (in which considerable felling took place some years since) has been taken up for a plantation for the more valuable timber yielding Eucalypti of Australia. A fine large nursery has been formed and many thousand plants of Eucalyptus globulus, one of the largest and best timber trees of Australia are now up and ready to be moved. Three acres are cleared ready for planting and a portion of this area has been pitted.

47. *Financial result.*

Expenditure..	...	...	3,811 12 0
Receipts. ...	...	...	4,983 15 9
Balance in favor of forests.		...	1,172 3 9

48. AUSTRALIAN PLANTATIONS.—New nursery formed. A very fine new nursery has been formed and is filled with seedlings of the Australian acacias and Eucalypti.

49. *Planting.*—2,000 young trees were planted out—4,000 running yards of trenches completed for planting early in the ensuing year.

50. *Supply of timber from the plantations.*—The older plantations have exhibited a rapid growth during the year, and a supply of poles, firewood and charcoal has been obtained from the thinnings.

51. *Change of Overseers.*—Major Morgan was not fortunate in his selection of an Overseer after Mr. Sheffield left these plantations for the Kurnool District, and the Overseer (Mr. Littlewood) had to be dismissed. Mr. Newman, a steady hardworking man is now in charge.

52. *Financial result.*

Expenditure...	...	...	1,582 15 5
Receipts. ...	...	...	779 14 0
Balance against the plantations		...	803 1 5

53. BHOWANI.—The regular working of the Sandalwood forests of this District commenced in September last, and the Sandalwood felled has not been sold.

54. *Financial result.*

Expenditure...	...	...	2,112 13 10
Receipts ..	...	...	539 12 1
Balance against the forest		...	1,573 1 9
Sandalwood in depôt 30th April 1865.			5,252 0 0
Deduct deficit against the forest.			1,573 1 9
Financial results for 1864-1865.			3,678 14 3

55. COLLEGAL.—*Depôt.*—A small timber depôt has been formed at Collegal, the demand for wood is not great at present.

56. *Operations.*—The Sandalwood has been systematically worked and yields a good Revenue.

57. *Financial result.*

Expenditure	...	...	...	5,698 0 9
Receipts	...	...	...	17,927 2 4
Balance in favor of forest		...	...	12,229 1 7

Timber felled during 1864-65.

Sandalwood ...	17,813 2 4	= 19,409 14 3	
Blackwood, Vengay, &c.	1,596 11 11		
Deduct sold during 1864-65. ...	...	17,890 1 6	
Balance on hand 3rd April 1865 ...	...	1,519 12 9	
Financial result for 1864-65 ...	...	13,748 14 4	

58. SATTIMUNGALUM.—A small establishment has at last been sanctioned for this taluq, but operations have not yet commenced.

59. SOUTH CANARA.—*Importance of systematically working the forests of this District.*—As the forests of North Canara and Hunsur have now been lost to the Madras Government, it is more than ever important that the ghat forests of South Canara (which are of great value) should be brought under systematic working. Government have just sanctioned this arrangement.—(Vide G O. No. 1065, 20th May 1865) and it will be carried out as soon as possible. In addition to the advantage that will be derived from the forests being systematically worked, the Revenue will also be enhanced, as the merchants will not purchase our timber when they can enter the forests and fell for themselves.

60. *Increase to Establishment.*—A third Overseer (at Rupees 60) was sanctioned during the year—(Vide G. O. No. 1128, 1st July 1864) to take charge of a taluq and to superintend planting operations, when the department undertakes the entire working of the ghat forests. A 4th Overseer will be required for the Cundapore taluq.

61. *Felling operations.*—During the year 2,886½ candies of timber and 28 Poon spars were felled by the department.

62. *Planting.*—No fresh planting was carried on last planting season (May), as the Overseer had not joined,—30 acres have been cleared and got ready for planting during the coming season.

63. *Teak nursery.*—A Teak nursery was commenced in April.

64. *Conservancy.*—The valuable young Teak forests of Sooliah, and Malcot have been cleared of undergrowth, and the young trees have been pruned.

65. *Another valuable timber discovered.*—A new species of Dipterocarpus. (Dipterocarpus indicus Bedd.) yielding a valuable timber has been discovered in the ghat forests—it is of the Sâl tribe and is called in Canarese Gugé marâ—it is abundant and grows to more than 100 feet high with a circumference of 15 feet—it is the first of the genus found in Southern India Proper, though valuable species of it are found in Ceylon and Burmah.

66. *Kiral Bogi timber.*—A log of this wood mentioned in the last Annual Report has been delivered to the Superintendent Gun Carriage Manufactory, but his Report upon it has not yet been received.

67. *Financial results.*

Expenditure.

Establishment	6,517 8 0		
Working charges.	9,466 8 10		
	Total...	15,984 0 10	

Receipts.

Sale of timber...	3,518 9 0		
Seignorage	17,664 0 8	21,182 9 8	
Balance in favor of forest,,, ...		5,198 8 10	

Value of timber on hand, 30th April 1864...			18,878	4	0
Add felled during 1864-1865...			13,365	9	7
			32,243	13	7
Deduct sold during 1865			3,518	9	0
	Total ..		28,725	4	7
Deduct difference in market rates of 1864 and 1865...			1,839	3	0
Value of timber on hand, 30th April 1865 ...			26,886	1	7
Surplus stock obtained during official year.				9,847	0 7
Financial return for 1864-65.				15,045	9 5

68. WYNAD.—*Demand for timber small.*—Major Gib, the Assistant Conservator gives several reasons for the demand for timber being very limited during the year, the chief of these was, that the Mysore Government suddenly put on a tax of 3 Rupees per log for all timber entering their territory—this tax has now been taken off.

69.—*Financial results.*

Expenditure.

Establishment...	10,978	1	4
Working charges...	4,945	6	8
Total... ...	15,923	8	0

Receipts.

Sale of timber...	10,254	1	6
Balance against the forest	5,669	6	6
Value of timber on hand, 30th April 1865... ...	32,236	5	0
Deduct value on hand, 30th April 1864	27,064	2	0
Surplus for 1864-65...	5,172	3	0
Add timber sold during the year, but not yet paid for	2,411	8	0
	7,583	11	0
Deduct balance against the forest	5,669	6	6
Financial return for 1864-65	1,914	4	6

By these returns it will be seen that though there is a balance of Rs. 5,669-6-6 against the forest for the year, the real return shows a balance of 1,914-4-6 in favor of the forest—this is very small, but as explained by Major Gib in his Report, the transactions have been very limited during the year, and the whole of the cost of his superintendence is debited against *Wynad*, though he has also had charge of *Hunsur*.

70. HUNSUR.—Agreeably to orders of Government, these forests were handed over to the Mysore Government on the 1st of March 1865. Their forest department has taken over all timber lying felled in the forest at a valuation of 1 Anna 8 Pice per cubic foot, but they have refused to take over the timber in depôt—this is valued at about 10,000 Rupees, and Major Gib expects to sell it all before next October.

71. *Financial results.*

Expenditure.

Cost of Establishment.	1,279	11	3
Working charges	3,332	13	6
Total ...	4,612	8	9

Receipts.

Sale of timber	18,790	8	10
Deduct expenditure	4,612	8	9
Balance in favor of forest for 1865	14,178	0	1
Value of timber on hand, 30th April 1865	10,375	7	9
Timber sold during the year, but not yet paid for...	6,712	2	8
	17,087	10	5
Deduct value of timber on hand, 30th April 1864 ...	24,279	14	6
Decrease in stock on hand during the year.	7,192	4	1

By these returns it will be seen that though there is a balance in favor of forest of Rs. 14,178-10-1, there is decrease in the stock of timber of Rs. 7,192-1-7—the real return for the year is therefore Rs. 6,985-8-6.

72. NELLUMBUR.—*Progress of the plantations.*—The growth of the Teak in these plantations is superb. Mr. Ferguson is a first rate forester, and does his work right well, he has however great difficulties to contend with—his establishment is generally in a disorganized state from fever. Labor is procured to a limited extent with great difficulty, and the Rajah's support, and influence is not given as it might be.

73. *Timber depôt.*—Our timber depôt at Calicut has not succeeded as well as was expected, without it however the department would be entirely at the mercy of the Native timber merchants and would suffer much more from their combination. A Mr. Cabral, late Timber Clerk to the Bombay Timber depôt has been appointed clerk to the depôt on a salary of Rupees 40 per mensem —(Vide G. O. No. 666 of the 25th March) Mr. Ballard the Collector considers him peculiarly fitted for the work.

74. *Operations.—Planting.*

	Acres.	
Teak planted...	106	
Plantations weeded	2,000	
Pruned	340	(above 300,000 trees.)

40,000 Saplings cut in thinning jungle felled and burned for planting—110 Acres.

Timber felled.

1,000 logs felled and dragged to river bank.
100 do. not dragged.

Floating to Depôt.

Logs floated...	1,550
Saplings floated	12,500
Bamboos	7,281

75. *Financial results.*

Expenditure.		16,039	2 5
Receipts		27,158	11 10
Balance in favor of forest. ...		11,119	9 5
Value of timber on hand, 30th April 1864.	35,600		
Deduct loss in market rates... ...	600		
	35,000		
Add felled during 1864-65... ...	34,000		
Total...	69,000		
Deduct sold during 1864-65. ...		27,158	11 10
Value on hand, 30th April 1865. ...		41,841	4 2
Surplus stock obtained during 1864-65 ...		6,841	4 2
Financial return for 1864-65		17,960	13 7

76. *Private forests make Government Conservancy difficult.*—Considerable tracts of forest in different Districts belong to private individuals, the proprietors generally seem averse to renting them to Government—they are in most cases rented out at very small sums, and are in all cases worked without any system or attempt at Conservancy. Collectors of Districts might be requested to obtain long leases of all such tracts on behalf of Government when practicable—at present these tracts are the cause of much clandestine felling in Government forests, which could not be altogether prevented without very much larger establishments than we now possess or than the Revenue from our forests authorizes. The larger the tract of forest in a District under the department the easier Conservancy becomes.

77. *Forest chart.*—A large forest map with memoranda for each District was published during the year.

78. *Distribution of Sál seed.*—Several large packets of Sal (Shorea robusta) seed were got down from Goomsur immediately after it ripened—this was tried with great care by Mr Ferguson at Nellumbur, and by Major Morgan at Mudumally, and also by several others—the seed however does not seem to have germinated in a single instance—almost all the seed seems to be attacked by some insect—further attempts will be made this year, such as poisoning the outer coating of the seed, and dipping the seed in wax—if these all fail, it will be evident that the seed will not retain its vitality for even so short a period as 2 weeks after leaving the parent tree. The Overseer at Goomsur has been instructed to send down several saplings for introduction at Nellumbur and the Madras Botanical Gardens.

79. *South Canara Sál.*—Appendix C. is a description and drawing of the "Dipterocarpus indicus." Another new tree of the Sál tribe discovered in South Canara and alluded to in para. 65 of this Report.

80. *Botanical drawings.*—Appendix B. is a list of new and rare plants drawn in the office of the Conservator during the year.

81. *Budget Estimates for the year.*—The Conservator originally estimated for an expenditure of Rs. 311,504, and receipts of about 500,000—the Government reduced the latter to Rs. 3,50,000, but this was subsequently raised by the Government of India to Rs. 450,000—the actual receipts have turned out to be 330,799-4-8, and the expenditure only Rs. 1,96,657-0-2.

The decrease in the expected receipts is attributable to the sales of timber in Mudumallay, Anamallay, and Wynad, having been much smaller than was anticipated, and is explained under each District in this Report

The Budget Estimates are sent in on the 15th of November for the ensuing official year commencing in April. So many circumstances regulate the demand, and the market value of timber, that our estimates must at the best be only guess work. This year some merchants indented for last supplies from Mudumallay, but would take none of the timber when they found that the Mysore Government had suddenly imposed a tax. The requirements of the Department Public Works are also very uncertain—sudden and unexpected demands sometimes arise; and on the other hand where large indents have been sent in, little or no timber is eventually taken, owing to a stoppage of works, or a difficulty about labor, &c. The supply of timber in different Districts must also be regulated in a great measure by circumstances—some seasons are very unhealthy, and the axemen leave the forests, and our carting operations are often greatly affected by excess of rain, by droughts or murrain amongst cattle. It seems, therefore, evident that the operations in different Districts must be left in a measure to the discretion of the Conservator, subject at the time to the sanction of Government.

82 *Financial results of the year.*

	RS.	A.	P.
Net Profit for the year...	1,33,911	0	6
Difference in value of timber in depôt on 30th April 1865 from the amount on the same date 1864.	68,829	12	6
Total Rupees...	2,02,741	3	0

In addition to the balance in favor of the department, a large sum has been expended in planting and general Conservancy.

I have the honor to be,

Sir,

Your most obedient servant,

R. H. BEDDOME, CAPTAIN.

Officiating Conservator of Forests

Financial Results of Forest Conservancy Department for 1864-65

Names of Forests.	Receipt by sale of timber, &c			Disbursements including cost of establishment and contingencies.			Balance in favor of Government			Excess of expenditure over receipts			Estimated value of timber stored in depôts			Remarks.
1 Gumsur and Surada ..	6,446	7	9	1,747	0	10	4,699	6	11	...	...		..	.	..	* Though there is a stock of about 1000 Logs of sal in depôt it has not been valued
2 Cud lapah	29,163	14	2	6,794	10	4	22,3 9	3	10	...		...	3,989	8	0	
3 North Arcot .	4,338	0	0	1,052	12	8	3,185	3	4	..	...	...		.		
4 Kurnool	39,492	6	0	4,903	7	10	34,578	14	2	...	...	...	155	0	0	
5 Salem	40,331	15	11	8,819	11	0	31 512	4	11	.	..	...	*10,495	0	0	
6. South Arcot ...	4,195	11	0	308	5	7	3,887	5	5	..	...	...	.	...	...	
7. Madura ...	6,382	11	2	3,478	0	4	2,904	10	10	.	...	...	4,473	0	0	
8 Anamallai . ..	21,031	14	9	31,145	13	10	...	..		10,113	14	1	3,13,766	9	9	
9 Cheuat Nair Forest ...	...	...	..	...	.	...	...	...		...	..	...	...	.	...	
10 Rolumputty ...	988	4	0	208	0	0	780	4	0	..	..	...		.	...	
11 Mudumallai	43,846	15	6	43,854	12	0	4,992	3	6	...	...	...	1,70,284	6	0	
12. Seegur . .	27,843	11	6	7,524	9	0	20,314	2	6	.	...	...	20,545	8	9	
13 Neilgherry Sholas ...	4,983	15	9	3,811	12	0	1,172	3	9	...	.	...	..	..	...	
14 Australian Plantation	779	14	0	1,582	15	5	...	...	...	803	1	5	...	...	..	
15. Bhowani	539	12	1	2,112	13	10	...	...	...	1,573	1	9	5,350	0	0	
16 Collegal ...	17,927	2	4	5,698	0	9	12,229	1	7	...	...	..	1,516	8	0	
17 South Canara	21,182	9	8	15,984	0	10	5,198	8	10	...	...	...	26,884	14	11	
18 Wynad	10,264	1	6	15,923	8	0	...	...	.	5,669	6	6	32,236	5	0	
19 Hunsur	18,790	8	10	4,612	8	9	14,178	0	1	...	..	..	17,160	11	6	
20 Nellumbur	27,158	11	10	16,039	2	5	11,119	9	5			..	41,341	4	2	
Total .	3,30,568	11	9	1,75,602	0	5	1,73,126	3	1	18,159	7	9	6,47,703	12	1	Timber on hand on the 30th April 1865
Deduct general charges													5,78,873	15	7	Deduct estimated value of timber on hand on the 30th April 1864 ....
Pay of the Conservator of Forest's Office Establishment travelling and contingent charges, &c				21,055	4	10							68,829	12	6	Excess of timber obtained during the year
Excess of Expenditure over Receipts				18,159	7	9	39,214	12	7							
Actual profit to Government							1,33,911	6	6							
Add excess of timber on hand on the 30th of April 1865 to that of 30th April 1864							68,829	12	6							
Financial result for 1864-65...							2,02,741	3	0							

* N B —Much of the Sandalwood is still unweighed but this sum represents the supposed valuation

APPENDIX A.

CAMP, OOTACAMUND, *3rd September* 1864.

No. 1,050.

From CAPTAIN R H. BEDDOME,
Officiating Conservator of Forests,

To J. D. SIM, ESQ,
Secretary to Government, Revenue Department,
Fort Saint George.

SIR,

1 I have the honor to inform you that I have made a tour through the forests of Tinnevelly, from the Madura District down as far as Courtallum.

2 The forests are all situated on the line of ghats, or at the foot of the hills ; a little more than one-half of the forests of the District belong to Government, the remainder to Zemindars, and private individuals. I forward herewith a list of all the forest land of the District, shewing what portions belong to Government and what to Zemindars, and the annual Revenue derived from each, the measurement is in Travancore chains (a chain being equal to 1,58,404 square feet)

3. No Conservancy has ever been attempted in this District, much reckless felling is carried on, and the annual destruction of valuable saplings is very great, and the large portion of the timber cut evades the Government tax. The Collector is of opinion that Conservancy should be put in force, and the system of printed vouchers and licenses introduced

4. The forests are very similar all the way down the range, though of course more valuable in some parts than in others. The forest near Vasadevanalur are the most valuable Government tract, and contain a considerable amount of Teak. The following is a list of the forest valuable timbers of the District :—

Tek.	Teak.
Iti.	Blackwood.
Vengay.	Pterocarpus marsupium.
Angali.	Artocarpus hirsuta, or wild jack.
Sumi or Vada muddi check	Soymida febrifuga, red cedar.
Maile.	Vitex alata.
Purusha or Vynara.	Satin wood.
Madagerry vembu.	Chickrassia tabularis, Chittagong wood.
Tun or Shandana vembu	Cedrela Toona, or white cedar
Mange kadambe.	Nauclea.
Thani.	Terminalia Bellerica.
Kadukai.	Do Chebula.
Vekali.	Conocarpus latifolius.
Vaghe	Acacia odoratissima.
Illupi.	Bassia latifolia.
Panas	Artocarpus integrifolia or Jack.
Poon bádre.	Bignonia Suaveolens
Shembaga pala.	Litsœa, zeylanica.
Tante palu.	Wrightia, sp.
Nang.	Mesua, sp.
Cong.	

5. If all the Zemindars' forests in this District could be leased by Government, I would certainly propose a regular forest establishment for the whole District—there is, however, I am afraid, little chance of this arrangement. The Zemindars derive very little profit from their forests, and when leased out it is generally for a very small sum, and no attempt at Conservancy

or the preservation of saplings is ever thought of—if, however, Government proposes to lease them an exorbitant sum is probably demanded. When I was in the Madura District last July, I learnt that the lease of the Bodynaikenoor Rajah's forests had nearly expired, these forests are situated in the ravines and on the slopes of the Uggamallay range (a spur from the South East corner of the Pulnies), and are of considerable value; they had been leased for three years to a Native at 150 Rupees per annum; the Rajah himself is a minor, but I saw the Manager of the estate, and tried to explain to him that it would be of great advantage to the estate if the forest could be rented to Government on a long lease, he said that he would lease it to Government, but asked 1,000 Rupees per annum. I then tried to explain to him that although he might get that sum from some timber merchants for a period of one or two years, the forests would be entirely destroyed and worth little or nothing, afterwards the merchants might make a clear sweep of all the timber ripe or unripe and even the saplings; whereas if Government leased the forest it would be their aim to conserve them, and their value would not deteriorate. I did not succeed in satisfying him, and I subsequently wrote to the Collector on the subject. I have no doubt that leases could be obtained on behalf of Government of many of these Zemindars' tracts of forests; the matter requires much tact, however, particularly as many of the owners have a sort of fear that if Government once gets possession they will probably take over the forest altogether. The subject is one of great importance, if the preservation of saplings alone is taken into consideration, the ultimate advantages to be derived from obtaining long leases of these tracts of forest could hardly be exaggerated. Government might take leases of all tracts of forest when a long lease can be obtained at a reasonable rate. The more forest brought under Conservancy the easier Conservancy becomes.

6. There is not much demand for timber in the Tinnevelly District, and the large amount of forest at present in the hands of Zemindars and others will render Conservancy difficult. The Government forests are, however, of considerable value, and some Conservancy should be introduced and the Revenue authorizes a small establishment. I propose, therefore, that at present only the forests north of Courtallum should be handed over to our department, and that these should be placed under the Overseer of the Cumbum valley, and he can therefore easily exercise supervision over the forests alluded to, which only extend down 30 to 40 miles south of his present range. The principal forests are at Wartrap and at Vasadevanaloor, and the following establishment is all that I would propose at present:—

		RS.	A.	P.
To be stationed at Wartrap or at Streevilliputur.	1 Duffadar at Rupees 15 .	15	0	0
	2 Peons at 6 „ each ..	12	0	0
To be stationed at Vasadevanalur	1 Duffadar at Rupees 15 ...	15	0	0
	2 Peons at 6 „ each ...	12	0	0
		54	0	0

7. The Government Forest Conservancy Rules and printed vouchers and licenses should of course be introduced.

8. The rates of seigniorage proposed by me to Mr. Silver, the Collector of Tinnevelly, are almost exactly the same as those now paid or rather supposed to be paid. I would suggest that I may be allowed to arrange the seigniorage list with the Collector, and that the same may be published by him in the District Gazette.

9. I am of opinion that the forests south of Courtallum should remain under the Collector for the present. Printed vouchers and licenses might be introduced with advantage, and as the revenue authorizes it, a Duffadar and a few Peons might be entertained to stop smuggling and the destruction of saplings.

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) R. H BEDDOME, CAPTAIN,

Officiating Conservator of Forests

APPENDIX B.

List of new and rare plants drawn in the Office of the Conservator of Forests in 1864-65.

Anonaceæ.

Uvaria, zeylanica (L.) Tinnevelly.
Mitrephora, Heyneana (Thw.) do
Miliusa, sp. near Montana Anamallays.

Sterculiaceæ.

Pterospermum rubiginosum (Heyne.)

Celastraceæ.

Pleurostylia, Wightii (U. A.)
Euonymus (s. p.) Tinnevelly.

Rhamnaceæ.

Ventilago (n. s. p) Salem (a valuable dye.)

Meliaceæ.

New genus near Cedrela Nilgiris.

Sapindaceæ.

Nephelium erectum (Thw.)
Euphoria, (s. p.) Tinnevelly.

Balsamineæ.

Impatiens cordata (Wight.) Tinnevelly.
do Ligulata (Bedd.) Anamallays.
do Anamallayensis (Bedd.) do
do Tangachee (Bedd.) do
do Parvifolia (Bedd.) do
do Elegans (Bedd.) do
do Wightiana (Bedd.) do
do Gardneriana (Wight.) Wynaad.
do Scabriuscula (Heyne)

Burseraceæ.

Trochisandra (new genus.) a tree. Anamallays.

Leguminosæ.

Edwardsia Wightiana (n. s. p.) Cuddapa hills.

Melastomaceæ

Pachycentria (n. s. p.) Anamallays.

Loranthaceæ

Loranthus Arnottianus (Wight.)

Rubiaceæ.

Lasianthus dichotomus (Wight.) hills. Tinnevelly.

Apocynaceæ.

Hunteria (s. p.) Tinnevelly.
Tabernamontana (s. p.). do

Oleaceæ.

Olea (s. p.) Wynad.

Ebenaceæ.

Diospyros (n. s. p.) Tinnevelly hills.
do Ebenum Retz. } The 2 Ebonies of
do Exsculpta } Cuddapa District.

Corneaceæ.

Bursinopetalum (s. p.) Anamallays.

Convolvulaceæ.

Argyreia (s. p.) Cuddapa hills.

Acanthaceæ.

Strobilanthes Wynaadensis (n. s. p.)
do tetrapterus Anamallays.

Lauraceæ.

Litsæa (n. s. p.) Tinnevelly.
Actinodaphne (n. s. p.) Cuddapa hills.

Euphorbiaceæ.

Pettandra (s. p.) Tinnevelly.
Epistylium latifolium (Wight.) } Tinnevelly.
do ovalifolium (Wight.) }
Agyneia (n. s. p.) Cuddapa.

Phytolaccaceæ.

Rivina lœvis, (L.) Tinnevelly hills.

APPENDIX C.

Description and Plate of Dipterocarpus Indicus.

Dipterocarpus Indicus (Bedd).

Every where glabrous, leaves oblong with a short acumination, long petioled, racemes erect, axillary shorter than the leaves, 6-8 flowered, sometimes paniculate.

Alofty tree, leaves 5 inches long, 2½ broad, petioles 2 inches long, pedicels 2-3 lines long, flowers large.

Abundant in the ghat forests of South Conara called in Canarese Gugá marà.

APPENDIX D.

ASSISTANT CONSERVATOR'S OFFICE,
Camp Cuddapa, 23rd May 1865.

No. 6.

From MR. H. H. YARDE,
Assistant Conservator of Forests.

To CAPTAIN R. H. BEDDOME,
Officiating Conservator of Forests.

SIR,

I have the honor to subjoin my Annual Report for the official year 1864-65.

2. I have on this occasion to add to my Report the transfer of the Polur and Vellore Forests of North Arcot District, with the Dhoor Taluq of the Cuddapa District sanctioned respectively by Government in their Proceedings No. 1916, dated 19th October 1864, and No. 693 dated 30th March 1865, with an Establishment as under.

1 Overseer.
1 Duffadar.
8 Peons.

at a cost of Rs. 123 per mensem for the former, and

1 Duffadar.
4 Peons.

for the latter, at a monthly cost of Rs. 39, making in all an extra total in establishment of Rupees 162.

NORTH ARCOT.

3. The forests of Thellay and Arasempett in the Vellore Taluq, with those of the Polur Taluq commenced Conservancy from the 1st December 1864 and works well, but would work still better if the jungles under the Collector's Conservancy in the Vellore Taluq were also handed over, as clandestine felling could be more effectually checked and order better established. At present owing to the many bye-ways and night carting, it is hardly possible that with a Peon at each jungle, illegal fellings could be eradicated, but the defect could be easily stopped, if the other less important jungles were placed under one charge, as a central and more convenient place than the present could be selected for a Tannah, and still, supervision extend to regulate and check fellings of every kind.

4. The jungles of Polur Taluq is free of such inconsistency as above noticed, as the whole Taluq is conserved by one department. I would also respectfully suggest that in the event of the jungles now under Conservancy of the Collector in the Vellore Taluq be seen requisite by Government for transfer to the Forest Department, that it will also apply to the jungles in the Chondragherry Taluq, some of which are under other Conservancy and adverted to in my Report of 1863-64.

I do not in the above suggestion at all augment greater Revenue, but I do contemplate that Conservancy could be better maintained, and the jungles preserved from being denuded, which circumstance is now very observable throughout the District.

5. *Rates of Seignorage.*—As no decision has been come to by Government in regard to the rates of seignorage for the Vellore and Polur Taluqs, the existing rates in force are those of Mr. Fraser's published in the District Gazette, dated 24th October 1863.

6. *Confiscation of Timber.*—Large quantities of Timber, Bamboos, &c. have been made during the latter months of the year under review in the Polur and Vellore Taluqs, but no sale has yet taken place.

The cause of this inconsistency is not attributable to want of vigilance by the department, but the forest system not entirely known or understood in the District. To remedy this cause,

and to prevent people imagining, they have a prescriptive right to fell in the forest without a license—wide circulation has been given to the rules both in the District Gazette as well as by tom-tom.

7. *Depôt at Vellore.*—For the opening of this Depôt, no timber has yet been stocked. The reason is, that Contractors have been shy to supply the department, as they consider that by its constitution the private Depôts of which there are many would materially suffer. Consequent on this I have been unable to adjust any portion of the amount Rs. 500 that was transferred from the Madura Forest to Vellore, as per Proceedings of Government No 49, dated 12th January 1865 in my accounts, although I have drawn and (lately) advanced Rs. 250 for the supply of timber, which I do not expect to have in till the end of May or June, when I will with your permission adjust it as an advance towards the allotment in the year 1865-66.

8. *Situation of Timber Depôt.*—I beg to be permitted to request here that Government will be pleased to sanction me for the purpose of a Timber Depôt, the piece of ground that the Military authorities of the Vellore Station have refused me, being as is said in the "Military limits, and that it would affect the sanitary condition of the place."

* 100 feet × 60 feet.

The site is the only one that could prove acceptable, on account of its proximity to the general bazars, and the junction of the Bangalore, Madras, Arcot and other roads. If the Depôt was constituted at any other place of Vellore, but the one referred to, compensation would have to be given by Government, as the lands immediately beyond the limits of the Cantonment are all under cultivation, and even then would be in my opinion at too reclusive a situation.

9. There is nothing in my opinion of a Timber Depôt to affect Sanatarism, and even if so, the department can at all times be insisted to have it clean, so as to be conducive to health, likewise as done with the bandy stand immediately below the site I refer to.

10. *Establishment.*—It is requisite to complete my views under this head. to solicit sanction for 2 more Peons at Rs. 6 each for the Chendragherry Taluq. My opinion will, I think, be found evident from the circumstance that Polygar's lands joining to that of Chendragherry are being denuded very fast of what really they possess, and I anticipate shortly that they will, if no surveillance be given, encroach on the limits of the Chendragherry Taluq to supply the unlucky deficiency of the other, on the increasing demands of fuel for the Railway.

11. *Revenue.*—Satisfactory results have been the occasion of labor in the year under review and as below.

	1862-63.			1863-64.			1864-65.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Timber	1,012	13	0	1,667	8	0	1,741	0	0
Firewood	306	3	9	648	13	0	1,226	4	0
Bamboos	54	6	0	70	4	0	1,270	12	0
Confiscated Timber...	...	...	...	185	14	3	...	0	0
Total Rupees...	1,373	6	9	2,572	7	3	4,238	0	0

12. *Cuddapah.*—The Dhoor Taluq having been only on the 30th March 1865 sanctioned for transfer, I have not thought it necessary to put it under Conservancy till the ensuing official year.

13. *Depôts.*—To meet the requirements of Indenting Officers, the Codoor Depôt had been well stored, and I am glad to observe that fruitful demands were made by the Railway and P. W. Departments during the year, realizing the amount of Rs. 4,845. 14-8.

14. Most of the Timber at Baulpully was spent in sale, but I have not restored it until there is a more convenient place for carting it to. The Railway Company purpose having a platform or receiving house at Baulpully cuttings for the lighting of Railway materials—when this project forms completion, I will have stock Timber in proportionate quantity at Baulpully, but which is on use now no account of the distance of the Depôt to any Terminal Station.

PLANTATION AT BAULPULLY OF.

15. *Red Saunders.*—During the official year under review, plantation of the above kind received my careful attention, and I am glad to notice that my efforts of the season were not so discouraging as the former There are now planted out at Baulpully 400 plants, each plant at a distance of 10 feet apart, and considering the present state of the season, I can say that they are in a general thriving state. June and July being the proper months for sowing, I intend setting largely of the seeds and to transfer some to the North Arcot jungles for trial.

16. *Muddis.*—I have been successful to about 800 plants of this species, which are also planted out and in creditable growth.

17. *Mangoe.*—(Wild). A few of these seeds had been sown with the two former and are now in good growth.

18. *Thuma.*—(Acacia Arabica) Consequent on the demands that will in future years arise for this material for the consumption of the Railway, I have in such portion of the forest where felling has taken place, particularly attended to the planting of it to balance former years devastations. Plantings are in this hot climate attended not only with bad results, but on the other hand expensive.

19. *Sale of Confiscated Timber.*—Confiscation in the year under review has been slightly in check, as it realizes the amount of Rs. 109-12-0 against Rs. 149-8-0 in the year 1863-64.

20. *Extra Establishment.*—To give entire supervision throughout the District, and yet to attend to the general duties of the same, comprising measuring of Timber, office work, attendance on plantation, &c. &c constrains me respectfully to request, that a 2nd Class Overseer on Rs. 80 with travelling allowance of Rs. 15, and a Writer or Gomasta on Rs. 30 per mensem be added to the establishment of the Cuddapa District.

The Revenue can well bear this small expenditure, and as the increase will tend to enhance still better Revenue, I beg that I may be permitted from the commencement of the official year to carry out this proposal. At present, my supervision is necessary throughout the whole of the District, as well as that of North Arcot, and consequently so much time on plantation and Depôt, cannot be spent to cultivate further experience by failures, as under other circumstances it would.

21. *Memorandum of Unaccounted Timber.*—This shews the balance of last year's Timber on hand, the quantity added and sold during the official year 1864-65, and the balance at present on hand with the amount realizes on sale.

Quantity and value of timber unaccounted for brought from last year's accounts

1,075-2½	cubic feet	at	10	Annas	per	cubic feet	...	684	10	4	
2,253-6	do.	at	8	Annas	do.		..	1,126	11	0	
											1,811 5 4

Quantity added.

3,230	cubic feet	at	10	0	Annas	per	cubic foot	...	2,018	12	0
1,239½	do.		8	0		do.		...	619	12	0
76	do.		1	2		do.		...	85	8	0
											2,724 0 0

Quantity sold.

3,200 cubic feet at 10	Annas per cubic. foot	...	2,000	0	0		
1,508 do.	8 do.	...	754	5	4		
76 do.	1-2 do.	...	85	8	0		
						2,839	13 4

Balance on hand.

1,105-2½ cubic feet at 10	Annas per cubic foot	...	703	6	0		
1,984-4 do	8 Annas do.	...	992	2	0		
						1,695	8 0
Profit			...		...	2,006	7 4

22. *Establishment.*—I have pleasure to record the willingness with which my subordinates during the year under notice have evinced towards their business; sickness, however, laid many of them up, and I had myself suffered with fever, incapacitating me for some weeks to attend to out-door business.

23. *Revenue.*—My labours this year have reaped, I hope, satisfaction in the amounts shewn in the appended Statement, that opens with the collections of 1862-63, 1863-64, 1864-65, to exhibit results of the various other years to the one under notice.

Description.	1862-63.			1863-64.			1864-65.		
	RS.	A.	P.	RS.	A.	P.	RS.	A.	P.
Timber	8,970	15	8	19,428	2	9	23,453	14	6
Firewood	420	4	0	1,017	9	6	472	12	0
Palmirahs	22	0	0	4	0	0	...	...	...
Bamboos	54	13	8	163	13	9	203	14	0
Charcoal	25	4	0	206	2	0	77	11	0
Sale of confiscated timber ...	1,227	13	0	149	8	0	109	12	0
Sale of timber from Depôt ...	..	...	...	682	6	0	4,845	14	8
...									
Total ..	10,721	2	4	21,651	10	0	29,163	14	2

24. FINANCIAL RESULTS.—In conclusion, I beg to subjoin an Abstract Statement shewing the financial results of both the Cuddapah and North Arcot Forests, and to record the very great assistance I have had from the Revenue authorities under whom I had frequent communications in matters concerning the forests.

CUDDAPAH DISTRICT.

Receipts.

Sales and seigniorage on timber	Rs.	29,163	14 2
Value of timber on stock...	„	1,695	8 0
	Rupees.	30,859	6 2

Disbursements.

Fixed Establishment.	Rs.	3,600	0 0
Working charges...		3,191	10 4
		6,794	10 4
In favor of Government...		24,064	11 10

NORTH ARCOT.

Receipts.

Sales and seigniorage on timber				Rs	4,238 0 0
Disbursements.					
Fixed Establishment...				„	1,052 12 8
In favor of Government.				„	3,185 3 4
Cuddapah...				Rs.	24,064 11 10
North Arcot...					3,185 3 4
			Total Rupees.		27,249 15 2

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) H. H. YARDE,

Assistant Conservator of Forests.

APPENDIX E

From MR. T. SHEFFIELD,

Assistant Conservator, Kurnool Forests,

To CAPTAIN R. H. BEDDOME,

Officiating Conservator of Forests.

SIR,

I have the honor to forword my Annual Report of the operation in the Nalla Mallai Forests of the Kurnool District during the year 1864-65.

1 In November last I entered on my present duties, and proceeded at once to make myself acquainted with the extent of the forests, their resources, outlets, and general working, to enable me to carry on the duties entrusted to me with energy.

2. *Forests*—The forests under my charge extend from Chayculmurry in the south, to the south bank of the Kistna river in the north of the Kurnool District. They are in length between 70 and 80 miles, and from 15 to 20 miles in breadth. There is an area of about 2,000 miles or good forests, exclusive of the forest lands at the foot of the Hills, which are of themselves of considerable extent and value, but not to be compared with the Hill forests.

3. *Value of the Nalla Mullai Forests.*—The value of these forests cannot be over-estimated considering the paucity of timber trees on this side of the Presidency, and the large extent of country supplied from them, not from choice, but because there are no other sources of supply within any moderate distance. There are large quantities of timber taken from these forests into the Districts of Bellary, Guntoor, Nellore, and Cuddapah, as well as to all parts of this District consequently the consumption is very great, and energetic measures are required to preserve the forest in fair condition; for should the forest rules be relaxed, or even if they are not made more strict by increase of seigniorage, increasing the best of reserved timbers, and the more severe punishment of all such as wilfully break the forest rules, in a few years all building timber in places accessible will be exhausted. The quantity of timber taken during the year from these forests on licences granted from this office is subjoined.

Table A., shewing the number of bandy loads of timber and bamboos taken on licenses from the forest during 1864-65.

Botanical names.	Telugu names.	Rough.	Worked.
Pterocarpus marsupium	Yeggi. ...	589	583
Terminalia tomentosa	Nalla Maddi. ...	3,428	3
„ arjuna	Eramaddi ...	...	3
Dalbergia latifolia	Jitigi. .	11	...
Hardwickia binata	Nar yepā. ...	1,161	120
Chloroxylon swietenia (Satin wood)	Billco. ..	200	...
Conocarpus latifolius	Chiriman. ..	74	2
Gmelina arborea	Gumar tek ..	...	...
Diospyros melanoxylon	Tunki. ...	140	...
Tectona grandis	Tek. ...	0	...
Mangifera Indica...	Mamadi. ...	40	...
	Junglewood. ...	18,301	...
	Bamboos. ...	4.721	...
Total..		28,674	711
Grand Total—No. of bandies...		29,385	...

4. It must be borne in mind that the above shews only what is taken on payment; but to arrive at an idea of the yearly consumption it is necessary to include the wood taken free by ryots for agricultural purposes; the immense quantity consumed yearly in the manufacture of charcoal to supply the numerous smelting forges; the Madras Irrigation and Canal Company; and for general consumption in the District; as also the quantity carried off as firewood, this is not less than 50,000 bandy loads which, added to the quantity above, makes a total yearly consumption of 79,385 bandy loads.

5. It will be seen from the above table that "Jungle wood" is chiefly used by the bulk of the people, and from this I am of opinion that did we take the working of these forests into our own hands, we might with advantage give "Jungle wood" on license as now, and fell the reserved kinds only, we should thus realize a fair profit, and at the same time rigidly carry out the chief object of conservancy, viz. the preservation of all valuable timber trees.

6. *Resources of the Forests.*—Teak of good scantling is not to be found in any large quantities except in the most northern parts about Peddicherroo, and in the deep gorges of the hills—in the latter places its inaccessibility has preserved it, and in the former the scarcity of inhabitants seems the cause of its preservation; but to whatever cause we attributed it we are fortunate in having it; for although no revenue is at present derived from this source, yet when the forests are worked by the Department, and roads are made and elephant power used instead of the present inefficient means, its value will be great and a large profit may be anticipated from this one wood alone.

7 *Teak Saplings.*—Sapling and the shoots from old stoles are found in abundance all over the forest, and are, generally speaking, of a fine straight growth, and in time will prove of great value. In some of the valleys the trees are almost wholly Teak, and I beg to recommend that in such cases a little money should be expended in assisting the growth of such young trees as require aid by cutting away all superfluous suckers, creepers, &c, as might retard their growth.

8. *Sandalwood.*—A few months back it was thought that no Sandalwood grew on these hills, but I am happy in being able to state that it has been discovered growing in abundance in the northern portion of the hills, commencing at Peddicherroo and continuing to the south bank of the Kistnah river, a length of 20 miles with a breadth of about 10 miles. As might have been expected, the ripe trees have all been felled, having, as I think, been smuggled off yearly by pilgrims and others who frequent the Shreesylum Pagoda.

9. This tract of Sandalwood will be of very great value in a few years, if we are successful in putting a stop to all smuggling, but that will be a matter of great difficulty, for the tract is far away from any villages except Chinchawar habitations; it is very unhealthy at all seasons of the year, and the facilities for smuggling are very great, there being three or four fords leading over the river into the Hyderabad States, into which most of the smuggled wood passes. However, I trust, I shall be able to give a good account of our vigilance at the end of the next official year.

10. *Nulla Maddi.*—(Terminalia tomentosa). This wood is the most plentiful, one found on these hills, and the one most in demand for all building purposes; it grows to a very large size, but the largest trees are seldom or never felled, as the inhabitants of the District have no means of removing them from the forest; consequently they cut trees which when squared can be dragged by one or two pairs of buffaloes.

11. I need scarcely remark that Government sustain a heavy loss by this system; for while the fine large ripe trees are left to decay and encumber the ground, young trees only half grown are felled. It is true that trees of a less circumference than three feet cannot be felled according to the forest rules, but still when there are numberless large ripe trees they should be cut in preference, but I fear the present system must continue till the forests are worked by the Department.

12. *Yeggi.*—Pterocarpus marsupium. This timber grows to a very large size on these Hills, but is not used by the Natives of the District except for carts and other agricultural implements, but it is nevertheless a very superior timber, and might be more generally used in the construction of houses; it is almost equal to Teak, will bear a cross strain of 600 lbs., and if well seasoned will stand exposure to all weathers.

13. The gum which exudes from this tree when cut is not put to any use in this District.

14. All applications for timber is for half wroughts, this causes a great deal of waste and the people in consequence pay double seigniorage.

15. *Billoo* (Satin wood, Chloroxylon swietenia) is very plentiful all over the Hills, and particularly plentiful and large at Buseverapoorum, but it is seldom that a large log can be procured that is free from heart rot. This is to be regretted, for the wood is of a very fine grain, tough, takes a good polish, and otherwise a fine useful timber.

16. The other woods of the reserved kinds mostly used are Yapi (Hardwickia binata) Chiriman (Conocarpus latifolius), and Tunki (Diospyros melanoxylon).

17. *Charcoal manufacture.*—There is an immense quantity of charcoal made in these forests for which no tax is collected; and the area of land yearly denuded of forest in manufacturing this article will surprise any person unacquainted with the quantity of wood required to produce each bandy load of charcoal.

18. In the two Taluqs, Sirwall and Cumbum, there are about 70 Iron smelting forges, which are in full work 200 days out of 365—each forge consumes one bandy load of charcoal daily, and to make each load three loads of wood are required, so that in this work alone 42,000 bandy loads of wood consumed yearly to produce 14,000 loads of charcoal, which, calculated at the very moderate rate of 8 Annas per cart load of 32 parahs, amounts to Rupees 7,000 last year.

19. My estimate of 8 Annas is very low, for on the Western Coast where wood is more plentiful, the cost of a load is about Rupees 5, and on the Neilgherry Hills it is from 8 to 10 Rupees per load of 32 parahs.

20. Add to the above quantity the consumption by the Madras Irrigation and Canal Company, the Kurnool market, and of the District generally, and we shall have a total of not less than 2,000 bandy loads of charcoal, or 60,000 loads of wood taken free of tax.

21. I do not think it would be unfair to put a small tax on this article. The greater portion is consumed by people, who can well afford to pay a small tax, and at the same time

they are people who cannot bring firewood the plea of "ancient custom" in support of them getting it free, for although in the case of the iron smelters, the real workers have long resided in the forests, yet they are nothing but *workmen*; the masters and those on whom the tax would fall are rich Sowcars, and for the most part reside a long way from the forest, and probably never see the iron till it is delivered to them at their godowns.

22. *Voucher and License system, antagonistic to Conservancy.*—The license system works well in this District, and although the tax is less, and the reserved timbers not so numerous as in other Districts, yet the actual profit is very satisfactory.

23 There is no large outlay when commencing work on this system, and the returns are quick, but after all, where conservancy is the chief object in view, this system is not the true one to carry out that object, for it is directly opposed to conservancy; the object of the latter is the preservation of immature trees; the tendency of the former system is directly contrary, from the simple fact that people, where a choice is left them, will naturally take those trees which suit their purposes best, and which require the least labour in felling, bringing out, and converting to the required dimensions. There is no doubt that this was the only possible system to commence with, as also that it could not with advantage be altered at once, but as it must eventually be abandoned or partly so, I beg with diffidence to suggest that the working of these forests should be gradually taken up by the department, commencing on a small scale and extending our operations as occasions may arise—we should thus have both systems at work at once, and should be able to compare them, and finally adopt the one best suited to keep up a continuous supply with a moderate profit, rather than the one which gives a large profit for a few years, but at the same time exhausts the forests, or both systems might be kept up, allowing "Jungle wood" to be taken on license, and working the reserved kinds as suggested in paragraph 5 of this Report.

24. *Planting*.—Government in their Order No. 410 of 23rd February 1865, paragraph 9, while remarking on the increasing demands for timber in the Kurnool District, suggested that some of the Australian Acacias might be tried in the Nalla Mallais with advantage. I beg to submit that it would not pay to grow firewood on the higher slopes of these hills, where there are no roads on other means of getting it to market except at great cost, even supposing they would thrive, but I am of opinion that not one of the species would answer here, the climate is too dry and hot. They do not answer in Bangalore, which place is several degrees cooler than the highest point of these hills, and the rain fall double as much as here, and on the lower hills or on the plains at the foot of the hill there is not the remotest chance of their thriving, besides, there is a line of forests averaging five miles in width from north to south of the District at the foot of the hill, which will supply the demands of the District for firewood for many years to come.

25. The only foreign plants which are likely to succeed, and at the same time prove profitable are some of the Eucalyptic. If we could succeed in establishing the plants, they could be reared, and plantations of them formed cheaper than plantations of any of the indigenous timber trees, and as they grow to a useful size quicker than native plants, they would prove more profitable

26. Could I procure a small supply of seeds, and if there were no objections to the experiment, I would open a small nursery, and the result whether success or failure could soon be ascertained; but planting in this climate can never prove as successful as planting on the Western Coast has proved, nor can it be done so cheaply.

27. *Roads.*—There are two portions of these forests, from which if roads were made, a large quantity of good timber could be procured of large scantling, Muthyconda and Peddicherroo. To the former place, which contains some very fine Teak, there is a bridle road of an easy gradient which if widened would answer admirably, and to the latter place there is a good road to the foot of the hills, and after rising the first hill, the road is good, but up the face of the first hill, a distance of about 1½ miles, there is no road. If this portion was opened, all the northern ports of the forest

could be worked by making branch fair weather roads, and as this is the richest portion of the forest, and the one from which the Kurnool market is supplied, I think that it would pay to make this road.

28. *Revenue.*—The subjoined form shews the seigniorage collected on timber in the District during the official years 1863-64 and 1864-65.

Statement B.

Comparative Statement shewing the amount collected on timber during the years 1863-64 and 1864-65.

Months.	For the year 1863-64.			For the year 1864-65.			Decrease.			Increase.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
May... ...	2,493	8	0	2,765	12	0	...	...	...	272	4	0
June ...	1,374	12	1	1,155	8	0	219	4	1	...	...	...
July ...	1,327	5	0	1,185	9	0	141	12	0	...	...	...
August ...	1,352	3	9	1,480	10	0	...	..	...	128	6	3
September ...	663	8	0	891	0	0	...	...	...	227	8	0
October ...	1,606	11	0	1,814	0	0	...	...	...	207	5	0
November ...	2,049	4	0	2,578	8	0	...	...	...	529	4	0
December ...	2,197	13	0	2,610	3	0	...	...	...	412	6	0
January ...	4,132	14	0	3,650	1	0	482	13	0	...	...	...
February ...	5,063	10	0	5,495	0	0	..	...	...	431	6	0
March ...	4,615	11	0	4,852	10	0	...	...	..	236	15	0
April ...	5,461	8	0	7,452	2	1	...	...	...	1,990	10	1
Confiscation ...	4,949	1	2	3,551	6	11	1,397	10	3	...	...	...
Total...	37,287	13	0	39,482	6	0	2,241	7	4	4,436	0	4

Financial Results.

The financial results of Conservancy for the year are as follows :—

Amount recovered on account of seigniorage ...	35,661	2	1
Do. do. by sale of timber at Depôt. ...	146	10	0
Do. do. timber supplied to Department Public Works	123	3	0
Do. do. by sale of confiscated timber.	3,551	6	11
Total Rupees...	39,482	6	0

Deduct.

Fixed Establishment	3,800	15	0		
Working charges	1,102	8	10		
				4,903	7 10
Net profit...				34,578	14 2
Add value of timber in Depôt 155* cubic feet at Rupees 1-5 per cubic foot...	202	7	0	202	7 0
Balance in favor of forest...				34,781	5 2

CAMP KURNOOL,
8th *May* 1865.

(Signed) T. SHEFFIELD,
Assistant Conservator of Kurnool Forests.

* Of this 155 cubic feet of wood to the value of Rupees 150-7-0 was sold, but as the money was not received in time to be credited in these accounts, it will be carried to this month's credit.

APPENDIX F.

MADURA, *26th May* 1865.

From Mr. T. N. TURNBULL,
Sub-Assistant Conservator of Madura Forests.

To CAPTAIN R. H. BEDDOME,
Officiating Conservator of Forests.

SIR,

1. I have the honor to submit my Annual Report on the Madura Forests for the official year 1864-65.

2. I assumed charge of this forest range from Mr. Sperschneider on the 28th of March 1865; from the very limited time which I have had for observation, beg that any shortcomings in this report may be overlooked.

3. *Forests.*—The principal forests in this district are named after the villages which lie adjacent to them, and are as follows :—

1. Aryambulli.
2. Verupatchi.
3. Gungawarputty.
4. Davadauputty.
5. Paulamallay.
6. Unddakarray.
7. Thengaray.
8. Comebay.
9. Cumbum.

In the first eight of the above, the voucher and license system is in force, and only the south-east corner of the Cumbum valley is systematically worked by the department, which is the only perfect way conservancy can be attained; but the operations being expensive, the working system is not so remunerative as the license system, when rigidly enforced; though introduced so far back as 1862-63, it is not yet perfectly understood in this District, and I trust from my experience while on probation in the Cuddapah District, and consequently in charge of the Kurnool Forests, to be able to bring this portion into systematic and efficient working order.

Subjoined is a brief notice of the timber trees reserved in the forests above named.

Teak.—This valuable wood is found in small quantities and of a stunted nature in the greater portion of the forests, and the chief uses to which it is applied are in the construction of felloes for wheels, and for house-building purposes; but it is not so eagerly sought after as Vengay by Natives for their economical uses.

By protecting the young Teak trees of the Cumbum valley from fire and creepers, we might in all probability be in possession of a fine Teak Forest in a few years hence.

Vengay—Though confined to the summits of hills is found throughout the Madura Forests, but the larger sized trees in proximity to the plains are becoming scarce, as it is most felled of all timber trees Conservancy, therefore, must be strictly enforced in preventing the reckless cutting of trees under three feet in circumference, and I would recommend the larger trees being "worked up" in the forest, as their precipitous situation will not permit of their being dragged down in beams, and I would exempt such parties who carry out the working system from paying the higher seigniorage for "worked up" timber, in order to encourage the felling of full grown trees situated in inaccessible tracts of the forests. Besides which, the existing establishment is far too limited to carry out the rules of the department, and by adopting the above suggestion, I would be able to enforce the spirit of the rule by watching the felling of the larger trees only Whereas by the present rules, the department being unable to attend to the duty of marking the trees fit for felling, allow persons paying the higher seigniorage for "worked up" timber to cut trees under three feet in circumference; thus the rule merely tends to the enhancing of revenue with no real advantage to conservancy.

Vaghe.—This hard and dark colored timber is used principally for spokes, and naves of cart wheels, and is largely found in good sized beams in these forests.

Malay Vembu and Sadana Vembu.—These are two species of Cedar abounding in the ravines, and especially skirting the mountain streams. The demand for them is small, the timber is at times used for doors for Native dwelling houses.

Blackwood.—Is found only in the south-east corner of the Cumbum valley; the larger sized trees having already been felled, I have observed good beams averaging 1½ foot square, but of a lightish color.

Kungiliam—I believe is found in the Kookul pass, and the road between Kodakarnel and Pareakolam. It is found in small quantities on the Lower Pulnies, and is used by the inhabitants for posts. This is a species of Sal.

Vellay Kungiliam.—Is a soft white wood found in the moist forests of the Lower Pulnies, and is never made use of. A resinous substance is extracted from this tree by the Natives.

Karamaraḍa.—The Nallamuddie of Kurnool, and the principal timber tree of that District, is seldom or never used here, not from any scarcity of the tree, but from the difficulty attending on its being worked up.

Angalli—Stands next to Teak in the estimation of ship-builders, there are a few stately trees in the Cumbum valley, but there being no demand for this wood they are never felled.

Karingalli—Is an Ebony found in this District, but not in any great quantity. The tree, though large in size, produces little if any heartwood, and is strictly conserved.

Sandalwood.—Is confined to only one particular spot on the Palathoor Hills, producing very little heartwood and of a very inferior description.

Rates of seigniorage—In this District compared with other Districts are high, yet no reduction can be recommended until a renovation of the forests is perceptible; for if we regard the continual complaints of those engaged in the timber trade, the forests would be deforested with astonishing rapidity, and the already impoverished forests would disappear; and as it can be safely assumed that the denudation of a country does affect its water supply, our measures must be such as to counteract this result.

Notwithstanding the Government sustain a loss, yet under the above circumstances the present rates seem unavoidably necessary; and it is to be hoped that conservancy of the forests will be considered a substantial future gain.

Fires.—Although this practice preponderates to a very great extent through all our forest lands, carrying destruction of the most disastrous nature before it, yet its occurrence appears unavoidable.

However rigid the exercise of rules, it has been found impracticable to check forest conflagrations, and, in my humble opinion, it never can be put a stop to; and I am led to the belief that its adoption has been instigated by Providence, not only that the ashes may be a manure to the undergrowth and nourishment of forage for cattle, but that it may achieve its first and important duty that of destroying all the poisonous and nephetic exhalations which tend to corrupt the natural air.

Depôt.—There having been a large stock of timber on hand, viz., 7,733¾ cubic feet at the close of the last official year, my predecessor did not deem it advisable to sink any more Government money on so unprofitable an undertaking, with little or no hope of being able to dispose of the timber, as noticed by him in his summary for the official year 1863-64: consequently no timber was felled during the past year, but as a good portion of our stock has been disposed of it will be necessary to lay in another supply in this season, and of which I have every prospect

of disposing, having received a very large estimate of his requirements from Mr. G. Fischer, the Manager of the Shevagunga Zemindary.

In connexion with this subject, I deem it necessary to bring to the prominent notice of Government, that we labor under great disadvantages by the Zemindars of this District holding valuable forest lands, and being able to undersell us, monopolize the timber market.

Inasmuch as the Zemindars will not lease their forests to Government, I respectfully submit that the Collector be instructed to induce them to assimilate their rates of seigniorage with ours, which would permit of our working far more harmoniously than at present.

Zemindary Boundaries.—Nothing, I believe, can be done in regard to the settlement of the boundaries of these Zemindars till the Revenue Settlement arrive in this District, and as these Zemindars' forests are so interwoven with ours, our most strenuous efforts to prevent clandestine felling are rendered abortive, while it affords timber speculators opportunities of plundering Government Forests under the protection of Zemindars' passports, which are easily obtained for a trifle paid to their Agents, or any body else professing to be their Agent.

Again, there is another point connected with the whole of the Zemindary Forests in this District which requires notice. As I consider some immediate remedy imperative, I allude to the present ruinous practice of felling undersized trees in forests owned by Zemindars and leased out to others. Up to this time we have kept aloof, and the consequence is the destruction of thousands of young trees, which as a matter of course denudes the forest of the supply of timber which would otherwise prove a valuable source in after years.

Some of the best forest tracts in this District are under Zemindars; and I therefore take the liberty of suggesting that the attention of Government be solicited, and measures adopted for the prohibition of so suicidal a practise, and that our rule relating to the felling of undersized timber trees be, as early as possible, rendered applicable to all Zemindars' Forests. Unless this is done, and that without any delay, forest tracts which have at present a small supply of valuable timber trees in them will be destroyed.

To prevent this and save the forests before they are beyond redemption, I would respectfully urge that permission of Government be obtained for a proclamation to be issued through the Collector by beat of tom-tom, or notice in the District Gazette, rendering the felling of undersized timber trees punishable by fine and confiscation of the timber felled. This restriction might with great advantage be confined to the more valuable trees, viz., Teak, Blackwood, and Vengay.

In closing this subject, I beg to state that, on looking over the Forest Chart, it is despairing to observe that fully two-thirds of the forests in this district are under Zemindary mismanagement.

This privilege is much abused, and it is a very difficult matter to find out whether the timber is really being cut for *bonâ fide* agricultural purposes or for sale, and while so many instances of favorable accessibility to corruption have often been exemplified, I respectfully ask what guarantee have we that these ryots, who use the forests as they think proper, act honestly, and fell sufficient for their agricultural pursuits and economical uses only. I have not the slightest doubt that they do, in league with merchants, fell timber for sale to their advantage, thus materially affecting our forest revenue.

I hope, however, to be able, with the concurrence of the Collector, and with every respect for the privilege of immemorial standing, conceding the grant of timber free of tax to ryots, to introduce a system similar to that in force in the Kurnool district, which will enable me to exercise greater vigilance and check the practice now obtaining.

Acacia plantation.—I regret much that I have been precluded from visiting this plantation from want of time, having had much to attend to since assuming charge of this range. My predecessor writing from Kodikanel, the European settlement on the Pulney Hills, states:—"I

went over to the Acacia plantation—the plants are doing well, though the long drought has tested them, so that many vacancies are observable."

I hope during this season to extend our planting operations, and as the Government attach great importance to a Red Saunders plantation, I purpose giving it a fair trial here. Red Saunders is not indigenous to this district.

Assistance from Revenue Authorities—There can be no doubt that the Forest and Revenue Departments cannot be separated, and it is a subject of regret to find that a departmental jealousy exists in this district. The Collector takes the greatest interest in our operations, but it is otherwise with his subordinates, who evince a great want of interest, simply because they are not personally concerned.

Establishment.—The health of the Establishment, on the whole, has been good.

I trust it will not be deemed out of place in my bringing to notice the use of cobwebs as a febrifuge. In the Kurnool district I had fair opportunities of testing its value, and can confidently assert that in virulent fever cases, where Quinine proved inefficacious, I have met with repeated success in the administration of cobwebs in five grain pills, six times a day, and it is a fact worthy of record that sooted cobwebs have produced quicker results than the ordinary house or tree webs.

I beg also to bring to notice the inadequate remuneration granted to our Peons in this range. Other Peons draw six Rupees, whereas here they receive only 4 and 5 Rupees each, and I would, therefore, respectfully recommend that they be placed on an equal footing with their more fortunate brethren; and unless this is granted, we cannot expect them to be faithful in the discharge of their duties, nor obtain men who can read and write, which is essentially necessary in order to their being able to check licences while passing by their respective tannahs.

Revenue.—The subjoined statement shews the Forest Revenue during the year under review, and the financial results can be considered satisfactory when it is observed that there is a balance in favor of Government of Rupees 2,904-10-10 to Rupees 1,254-1-4 against the forests in 1863-64.

		Rs.	A.	P.			
May	1864	52	0	0			
June	„	59	14	0			
July	„	71	0	0			
August	„	125	14	0			
September	„	100	12	0			
October	„	54	1	1			
November	„	82	1	9			
December	„	211	13	5			
January	1865.	107	7	0			
February	„	80	0	7			
March	„	1,228	4	6			
April	„	4,203	6	10			
					6,382	11	2
Deduct							
Fixed Establishment		2,486	0	0			
Forest Expenditure		992	0	4	3,478	0	4
Balance in favor of Government, Rupees...					2,904	10	10

In conclusion, I beg to observe that, if "Forest Conservancy" is to be carried out in its true sense, we cannot ever expect to realize a revenue in this district, as the forests have already been denuded of its best timber trees.

I have the honor to be,
Sir,
Your most obedient servant,
(Signed) T. N. TURNBULL,
Sub-Assistant Conservator of Madura Forests.

APPENDIX G.

CAMP. COIMBATORE, 1*st May* 1865.

From MAJOR J. MICHAEL,
Deputy Conservator of Anamallais,

TO THE CONSERVATOR OF FORESTS.

SIR,

I have the honor to submit the Annual Accounts of the Anamallay Range for 1864-65 together with the usual accompaniments.

I must premise that as I only returned from leave and assumed charge from Mr. Spring on the 10th March, after the active operations of the working season were ended, I am principally dependent on his Monthly Progress Report for materials on which to compile a summary of the year's work.

Felling and preparing Timber.

The season's cutting consisted almost entirely of logs and heads of trees, of which 1,554 were prepared and stored in the forest; 308 planks and heads were also cut, the total cost for cutting being Rupees 4,990-0. All this timber, 1,862 pieces in number, was taken from the Colungode Numbady's leased forests. The number of trees felled being 955, or rather more than one tree to every two pieces, the stump fee paid amounting to Rupees 4,745. It is stated in Mr. Spring's Report for January 1865, that large trees are becoming scarce in the leased forest, and that it is now difficult to find any which will yield dock-yard planks, but there must be still a large number of trees from which log timber can be obtained. I would remark here that the lease of this forest will expire shortly, and that it might be renewed with advantage.

Carting in the Forest.

The items of carting above and below ghaut have not been shewn separately in the Monthly Accounts, so that I am unable to state exactly the number of planks which have been carted from the forest to the loss of the slip. An examination of the Bill Book shews, however, that 1,338 planks have been paid for since June amounting to Rupees 4,910.

Slipping.

The Government Elephants have slipped about 945 planks during the season, 737 planks appears to have been also slipped by cooly labor, at 8 Annas per plank, making a total of 1,682 planks.

Carting from foot of slips to Mungarah.

The total number of planks carted to Mungarah during the year is 871, at a cost of Rupees 4,335.

Floating Planks to Ponnany.

Two hundred and forty-three planks were floated to Ponnany, at an expense of Rupees 98-11-6. These added to 654 planks which remained there last year, making a total of 897, are still in the Depôt. An auction was advertised to take place on the 10th April, but very few bidders appeared, the merchants on the coast being unwilling to purchase timber so late in the season, as they are unable to ship it for Bombay before

the monsoon The bidding was so bad, that the sale was postponed Fair prices will no doubt be obtained if the next sale takes place immediately that the coast is open.

Carting to Coimbatore

Two hundred and ninty-seven Dockyard planks and logs were brought into Coimbatore, a Depôt established, and a sale advertised to take place on the 3rd April Four small lots only were bid for at such very low prices, viz, Rupees 1-4-0 per cubic foot that I did not consider it right to sell any more There is no demand for such timber as dockyard planks in Coimbatore, and it must either be sold at a loss or sent to Ponnany or Madras

Sale of Timber.

The sales this season have been very small, timber to the value of Rupees 14,134-6-4 was furnished to the Madras Gun Carriage Manufactory and to the Public Works Department This is shewn in the statement accompanying the accounts, a further supply of planks, timber to the value of about Rupees 6,000, was also selected by an Agent despatched by the Gun Carriage Manufactory, but this cannot be shewn in the accounts, as the Commissariat Department has not yet delivered the timber at Madras, and no receipt has therefore been passed to the Forest Department.

Seigniorage

It will be observed in the statement alluded to above that the seigniorage received from the Bolumputty and Sholakurray Forests only amounts to Rupees 968-4-0. The license system, if efficiently introduced and carried out, ought to produce a large revenue from these forests, hitherto they have received very inadequate supervision In my opinion it would repay Government well, if besides a sufficient Establishment of Duffadur and Peons to check licenses at each outlet from the forests, an extra Overseer were maintained on the strength of the Range Establishment, so as to admit of the Deputy Conservator detailing each of his Overseers in turn for a few months at a time as a sort of relaxation to reside at Coimbatore, visiting Bolumputty and Sholakurray frequently and at certain periods, and having for the time special charge of any operations which may be carried on there departmentally

Financial Results

The total amount shewn in the Annual Accounts to the credit of the range amounts to Rupees 21,031-14-9 This would have been increased by Rupees 6,000 if the timber selected by the Gun Carriage Manufactory has been delivered at Madras by the Commissariat Department. But on the other hand the item of Rupees 27,272-7-7 was the proceeds of a sale at Ponnany last year, and credit was taken for that amount in 1863-64 The actual revenue from all sources, for the year 1864-65, therefore, stands at Rupees 21,031-14-9 against an expenditure of Rupees 31,145-12-10. The deficit is to be attributed to the failure of the auction sales at Coimbatore and Ponnany

I have the honor to be,
Sir,
Your most obedient servant,

(Signed) J MICHAEL, MAJOR,
Deputy Conservator of Forests

APPENDIX H.

Annual Report of the Forests under Major H. R. Morgan, Deputy Conservator of Forests

The expenditure of the whole of the forests amounts to Rupees 64,584-15-0 and the receipts to 1,00,921-7-2, shewing a profit of Rupees 39,336-8-2, as per table A, and a stock of wood on hand valued at Rupees 197,596-6-9 as per table B.

Mudumallai Forest.

1 The expenditure amounts to Rupees 43,854-12-0, and the receipts to Rupees 48,846-13-6 shewing a profit of Rupees 4 992-3-6, with a stock of timber on hand valued at Rupees 170,284-6-0.

Felling.

2. A large amount of timber has been felled this year, 92,442¼ cubic feet, enough to meet the demand for two years. It was absolutely necessary to take advantage of the Coorumbers' labor when obtainable, as under the present state of matters it is impossible to say how long we may retain the labor, surrounded as the forest is by Coffee plantations and no Contract Law is in force.

Carting.

3. The stringent orders against advances, murrain, which has for two successive years carried off numerous bullocks of the contractors, have tended to reduce our carting strength to a minimum; to supplement it, 30 Government carts and 50 pairs of bullocks are employed, and it will soon be absolutely necessary to double the number, if only to supply the Government works at Ootacamund with timber. A large merchant offered to carry from the Karkanah, Mudumallai to Ootacamund for 10 Annas a cubic foot, whilst our Cart Contractors have never cost more than 8 Annas a cubic foot—2 Annas a cubic foot over 40,000 cubic feet = 5,000 Rupees, a dead loss to the forest.

The want of a Contract Law is again felt here—a man takes an advance, works a short time then runs away. The Thasildar of his Taluq is written to, who sends him back with one cart and two bullocks, the rest he has sold, he cannot of course work out his contract unless he gets a fresh advance, if the offence were penal, he would hesitate before selling his bullocks.

Sawyers

4. The work has been much hampered through want of sawyers—men come, take advances, work off a portion, and then decamp, warrants are out all over the country, perhaps two of a set are caught, but the third can't be found As it requires three men to saw, the two men are idle until the third turns up, which never occurs. All this is for want of a Contract Law, men now make a regular trade of taking advances every where and find it very profitable.

Jungle wood

5 Rupees 1,600 have been derived from the sale of Jungle wood, and this year the amount will probably be larger

Financial results

6 At the beginning of the year large offers for timber were received, but the Mysore Government having imposed a tax of 3 Rupees a cart load, the merchants refused to take the timber applied for, and instead of a profit of at least 20,000 Rupees, the forest shews but 4,992-6-6. The tax was only taken off in January 1865 The Lawrence Asylum Works only took 20,000 out of 80,000 cubic feet indented for.

APPENDIX I

Seegur Forests.

1. This forest has not been worked except for Sandalwood The expenditure amounts to Rupees 7,524-9-0, and the receipts to Rupees 27,843-11-6, with a stock of Sandalwood on hand amounting to Rupees 20,319-2-6. The profit would have been greater had not the merchant been obliged to leave a portion of his Sandalwood 7,000 Rupees worth, at Tullamullai in consequence of not being able to obtain carriage—the road from Tullamullai to Atkoleporum being still in course of construction.

Sandalwood Plantation.

2 Experiments in planting Sandalwood are still being carried out, eight acres have been cleared and ploughed, the young plants requiring shade for the first two years There has been a difficulty in ascertaining the most economical and successful mode of planting, to cut the top root does not answer, as the plant requires to plunge its root deep into the sub-soil to secure moisture in the hot weather The most feasible plan to secure shade and not to disturb the plant is to sow the seed in lines, one foot apart in the drills, the drills three feet apart between the drills, the quick growing ganjah plants to be sown, when the plants are two years old the ganjah may be cut down, and the weak Sandalwood saplings weeded out.

Suttiamungalun Forest.

An establishment has been granted for this Taluq lately, there is a good deal of Sandalwood in it, also Blackwood, Vengay, Sal, Vellenaga, Satinwood, &c. ; it is expected that the demand for wood will yield a fair return.

APPENDIX K.

Neilgherry Sholas.

1. The expenditure for the past year amounts to Rupees 3,811-12-0, and the returns to Rupees 4,983-15-9, shewing a small profit of Rupees 1,172-3-9.

Supply of Firewood.

2. The supply of firewood for the past year has been abundant, and now that the Devi Shola is being felled, a supply for five years to come is certain.

Planting.

3. The sholahs felled for the supply of firewood two years ago have been planted, and the trees are flourishing, two nurseries have been formed and many thousand plants are ready to be put out in June next.

Eucalyptus Plantation and Nursery.

4. A good nursery for 20,000 plants have been formed in a sholah near the Seegur road, many thousand Eucalypti are coming up, and ready to be moved into beds—three acres of ground have been cleared for planting and 1¼ acres are ready pitted.

Table A.

No.	Forest.	Receipts. In actual cash by sale of wood, &c			By Timber supplied to Public Works			Total.			Expenditure. Pay, &c of the Superintendent and Establishment.			Working charges.			Total.			Financial Results. Balance in favor of the Forest.			Balance against the Forest.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs	A.	P.	Rs.	A.	P.
1	Mudumallai	11,189	0	0	37,057	15	6	48,246	15	6	16,568	5	11	27,391	6	1	43,954	12	0	4,992	3	6	...	...	...
2	Seegur	27,843	11	6	...	...	...	27,843	11	6	600	0	0	6,924	9	0	7,524	9	0	20,319	2	6	...	.	...
3	Neilgherry	4,892	7	9	91	8	0	4,983	15	9	1,864	2	7	1,947	9	5	3 811	12	0	1,172	3	9	...	...	...
4	Wellington ...	626	14	0	153	0	0	779	14	0	543	15	8	1,039	0	2	1,582	15	5	...	...	...	803	1	5
5	Bhowani	539	12	1	...	...	..	539	12	1	1,068	0	0	1,044	13	10	2 112	13	10	...	...	...	1 573	1	9
6	Collegall	17,927	2	4	...	.	...	17,927	2	4	1 159	1	6	4,538	15	3	5 698	0	9	12,229	1	7	...	...	...
	Total...	63,018	15	8	37,902	7	6	100,921	7	2	21,798	9	3	42,786	5	9	64,584	15	0	38,712	11	4	2,376	3	2

Table B.

No.	Forest.	Balance of wood in hand on 30th April 1865.			Value of Sandalwood felled and brought to Depôt.			Value of Teak, Vengay, Black wood felled & brought to Depôt.			Total.			Value of Sandalwood sold.			Value of Teak, &c.			Total.			Balance on hand on 30th April 1865.		
		Rs.	A.	P.	Rs.	A	P.	Rs.	A.	P.	Rs.	A.	P.	Rs	A	P.	Rs.	A.	P.	* Rs	A.	P.	Rs.	A.	P.
1	Mudumallai	1,48,804	1	0	...	...	..	75,155	10	3	2,18,459	11	3	...	...	...	48,175	5	3	48.175	5	3	1,70,284	6	0
2	Seegur	15,985	13	11	32,394	6	4	...	...	...	48,380	4	3	27,634	11	6	...	...	...	27 834	11	6	20 545	8	9
3	Neilgherry	...	...	...	...	...	...	...	...	...	...	.	...	...	...	...	...	...	...	...	...	...	...	...	...
4	Wellington	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	Bhowani	...	...	...	5,250	0	0	...	...	...	5,250	0	0	...	...	...	...	...	...	...	...	...	5,250	0	0
6	Collegall...	...	...	...	17,818	2	4	1,596	14	11	1,19,409	11	3	17,004	10	4	888	11	11	17,893	6	3	1,516	8	0
	Total... ...	...			...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,97.506	6	9

APPENDIX L.

Wellington Australian Plantation.

1. The expenditure amounts to Rupees 1,582-15-5, and the returns to Rupees 779-14-0.

Planting.

2. But little ground was planted in the year, as it was found that from the frequent change of Overseers, it was impossible to trust them to plant without baskets: these were unobtainable, they having risen in price from 10 to 30

* In addition to this, plants have been sold to the value of Rupees 469-12-2.

Rupees a thousand, as a substitute, bamboos had to be procured, 5,000 have been prepared at a cost of 12 Rupees a thousand, they answer the purpose well, in fact in most cases can be used twice over

Nursery

3 A large nursery to hold 15,000 plants was formed and stocked with plants of A melanoxylon, A dealbata and Eucalyptus giganteus.

Financial results

4 For the first time the old plantations have yielded firewood and charcoal for the supply of the Barracks, and a steady supply from thinnings may be expected. The Lawrence Asylum works have also been supplied with poles for scaffolding

APPENDIX M

Bhowani Forests.

1. The expenditure amounts to Rupees 2,112-13-10, and the returns to Rupees 539-12-1, with a stock of Sandalwood on hand of Rupees 5,250.

2. There have been no sales of Sandalwood, as the forests were only regularly taken over after having been reported on in September last, but a large stock of Sandalwood remains on hand.

APPENDIX N.

Collegal Forest.

1. The expenditure amounts to Rupees 5,698-0-9, and the returns to Rupees 17,927-2-4, with a stock of wood on hand of Rupees 1,516-8-0.

Jungle wood.

2. These forests were all explored last August and reported on Much valuable Sandalwood, Acha, Satinwood, &c. was found.

Timber Depôt

3. A small timber depôt has been formed in Collegall, but at present the demand for wood is not great.

OOTACAMUND,
15*th May* 1865.

(Signed) H. R MORGAN, Major,
Deputy Conservator of Forests.

APPENDIX O.

Administration Report of South Canara Forests for the official year 1864-65.

From Mr. E. THOMPSON,
Assistant Conservator of Forests, South Canara.

To CAPTAIN R. H. BEDDOME,
Officiating Conservator of Forests.

SIR,

I beg to inform you that during the official year just closed our expenditure was Rupees 15,984-0-10, pay of fixed establishment included, and our receipts is Rupees 21,182-9-8, which leaves a balance of Rupees 5,198-8-10 in favor of Government.

Our receipts should have been something more, but as the money was not collected by the Taluq Tahsildars, it could not be taken into credit.

Out of the stock of timber on hand I was only able to sell 570 Bombay candies and 400 bamboos. The sum realized on this quantity was Rupees 3,482-9-0.

The market is stocked with timber, and the merchants did not feel inclined to add to the quantity they have already on hand, others requiring small quantities for their own use prefer cutting it themselves under the license system—in fact we may never look for large sales of timber as long as license system is in force.

During the year we felled 2,886¼ Bombay candies of timber, 28 poon spars, 14 boats, and 1,490 bamboos. The greater part of this timber is taken out of the jungle and is ready for sale or floating to the coast, if not sold where it is.

We have cleared a piece of jungle (about 30 acres) for the purpose of planting it with Teak We have planted nothing this year, as the old plantation does not seem to thrive. The plants are alive, but they are not growing large.

The ground now cleared is virgin soil, so we will be able to see the difference between it and the old plantation which was formed on old Coomry ground.

The greater part of the Teak forests in Sooliah and Maloot have been pruned and cleared of the brushwood and creepers which were choking them up. We have some lakhs of trees in this jungle which are at present doing well.

The license system appears to work well in this district. The applications for licenses are increasing yearly. This if it goes on will put a stop to us finding any sale for our timber

I have the honor to be,
Sir,
Your most obedient servant,
(Signed) E. THOMPSON,
Assistant Conservator of Forests, South Canara.

CAMP MANGALORE, 12*th May* 1865.

APPENDIX. P.

Annual Administration Report of Wynad Forests for the official year 1864-65

During the past year, the expenditure and receipts have been as follows —

	Rs.	A.	P	Rs	A	P
Expenditure.						
Cost of establishment ...	10,978	1	4			
Working charges	4,945	6	8			
				15,923	8	0
Receipts.						
Realized by sale of wood in cash ...	10,254	1	6			
				10,254	1	6
Balance against forest...				5,669	6	6
Cash balance on hand on 30th April 1865 ...	6	15	0			
Advance outstanding unadjusted on the 30th April 1865...	1,753	6	0			
				1,760	5	0
Total balance to be carried to next year's account...				1,760	5	0

Quantity and estimated value of timber on hand on the 30*th April* 1865.

Teakwood on hand on the 30th April 1864, cubic feet...	54,114
Add felled during the year ... ... „ ...	31,848¼
	85,962¼

Deduct

Bonâ fide sale of wood during the year 1864-65 cubic feet	14,241½		
Destroyed by fire ... ... „	395		
Timber supplied to the Ordnance and Railway Departments for which payment has not been received.. „	2,190½		
Balance on hand... „	69,135½		
Value at Rupees...		32,035	7 0
Blackwood on the 30th April 1865, Cubic feet 167, valued Rupees		62	10 0
Honah and Mutte on hand on the 30th April 1864 Cubic feet.	297		
Add felled during year... ... ... „	256		
	553, valued.	138	4 0
Total value of wood on hand Rupees...		32,236	5 0

* (*Note.*—"Besides the above a quantity of wood, viz., 2,190½ cubic feet, valued at Rupees 2,411-8-0, is still unpaid for as noted below.")

	Cubic feet.		Value. Rs. A. P.
Commissariat and Ordnance Departments ...	1,332	=	1,496 12 0
Railway Department at Bangalore	858½	=	914 12 0
	2,190½	=	2,411 8 0

The Officer in charge of Hoonsoor was supplied on his requisition with timber for the Commissariat and Ordnance Departments, but although he has been applied to for the usual certificate of supply three times lately, it has not as yet been received from him, though it is understood he has endeavoured to obtain it from the Officers who actually received the timber.

The Railway Manager has paid in part for the timber supplied to him, but there is still a balance against him as mentioned above of Rupees 914-12-0, and he also has been applied to three times for the money, but he had not up to 30th April 1865 even taken any notice of the Deputy Conservator's letter. Receipts for the timber are in the Deputy Conservator's office.

From the above it will be seen that there is a balance against the forest of Rupees 5,669-6-6. Several causes have conduced to this result, first, June or July 1864, the Mysore Forest Department sold the whole of the timber then in their wood yard, the accumulation of more than a year, having held it back when the Wynad timber was permitted to pass. Secondly, in May the Mysore Government raised the Import duty from 1 to 3 Rupees per cart load even on that sold to the Bangalore Railway, and this naturally deterred the wood merchants from Wynad timber. Thirdly, The Hoonsoor Forests having been given back to the Mysore Government, the Deputy Conservator endeavoured to sell the timber of that forest then in depôt so as to wind up the accounts in preference to selling the Wynad timber, and fourthly, the Commissariat Department towards the end of the year sold off a large stock of timber at Hoonsoor. As shewn in the note at the foot of the accounts, Rupees 2,411-8-0 are still due to the forest, and must be brought to the credit next year when received.

During the past year the quantity of timber brought to depôt has been very small, owing to the impossibility of obtaining bullock carts. A murrain prevailed amongst the cattle in the Heggedathavanahcotta taluq, from whence all our carriage comes, and besides this the demand for grain in the Bellary district appears to have drawn away many of the carts. To this may be added the Deputy Conservator's unwillingness to give large advances, their greatest inducement

to come, owing to the repeated injunctions of the Accountant General to clear off all advances within three months, which the Deputy Conservator feels it is in all cases not possible to do. It is hoped in the ensuing year by slightly raising the rates a sufficient number of carts will be procurable.

The Deputy Conservator obtained permission to spend 1,500 Rupees of the working charges in the purchase of carts and bullocks. This, however, was rather late in the year, and not finding them procurable at first, he considered it more expedient to delay the purchase some months, for if bought just before the monsoon, the department would be burdened with the expense of their keep (besides running risk of casualties) for months before they could do any work—no carting being done from April till September.

In concurrence with the wishes of the Collector of Malabar, in December the Deputy Conservator, with the assistance of the Tahsildar of Wynad, and accompanied by the Trustees of the Pulpilly temple, marked out the boundaries of the forests and lands claimed by them on behalf of the temple. To prevent disputes for the future, the Trustees might be directed to erect large boundary stones where no natural boundary exists, which fortunately is only the case in a few places.

During the past year there has been a good deal of sickness in the establishment. Three of the second Goomastah's children died, as did also the Duffadar of Peons and one Peon, both good men and difficult to be replaced, while the whole of the remainder of the establishment have suffered more or less from fever,

(Signed) W. A. GIB, MAJOR,
Deputy Conservator of Forests.

APPENDIX. Q.

Annual Administration Report of Hoonsur Forests for the official year 1864-65

During the past year the expenditure and receipts have been as follows :—

Expenditure.	Rs. A. P.	
Cost of establishment	1,279 11 3	
Working charges	3,332 13 6	
		4,612 8 9
Receipts.		
Realized by sale of wood in cash	18,724 4 10	
Certificate from the Commissariat Department for the wood supplied by the Deputy Conservator	66 4 0	
		18,790 8 10
Balance in favor of Government...		14,178 0 1

Quantity and estimated value of wood on hand on the 30th April 1865.

Teak on hand on the 30th April 1864, cubic feet	40,850½
Add felled during the year ... ... „	1,604½
	56,894½

Deduct

Actual sale of wood during the year	Cubic feet.	22,962			
Timber supplied to Ordnance, Mysore Forest and Railway Departments for which money and certificate have not been received	„	17,310½			
Total sale ...	„	40,272½			
Balance on hand ...	„	16,621¼			
Valued at Rupees...			10,265	5	3
Honah and Muttee balance on the 30th April 1864	Cubic feet.	353			
Add felled during year.	„	108			
		461			
Deduct sold during year.	„	108			
Balance...	„	353			
Valued at Rupees...			110	5	0
Total value of wood on hand Rupees...			10,375	10	3

Note.—Besides the above Rupees 6,712-2 8, the value of 17,310½ cubic feet, are still due to the forest as noted below:—

	Cubic feet.	Rs.	A.	P
Mysore Forest Department... ...	12,319 value	1,283	3	8
Commissariat do.	3,344¼ „	3,763	1	0
Railway do.	1,646¼ „	1,665	14	0
Total ..	17,310½ „	6,712	2	8

That due by the Mysore Forest Department is for the felled timber in the forest at the time of transfer.

The officer in charge of Hoonsoor was supplied on his requisition with timber for the Commissariat and Ordnance Departments, but although he has been applied to for the usual certificate of supply, three times lately it has not as yet been received from him, though it is understood he has endeavoured to obtain it from the officers who actually receive the timber.

The Railway Manager has paid in part for the timber supplied to him, but there is still a balance against him as mentioned above of Rupees 1,665-14-0, and he also has been applied to three times for the money, but he had not up to 30th April 1865 even taken any notice of the Deputy Conservator's letter. Receipts for the timber are in the Deputy Conservator's office.

As soon as intimation reached the Deputy Conservator that the Hoonsoor Forests were to be given back to the Mysore Government, he put a stop to all felling, and endeavoured to get that already felled into Depôt.

Agreeably to the orders of Government the Forests were handed over to the Mysore Forest Department on the 1st March 1865, that Department agreeing to give Rupees 1-8-0 per cubic foot for all the felled timber lying in the Forests. The value of this timber at this rate is Rupees 1,283-3-8, but not having been received cannot be entered in the accounts. As shown in the note at the foot of the accounts, there is a further sum of Rupees 5,428-15-0 due to the Forest, part by the Commissariat Department, and part by the Railway Department at Bangalore, but not having been received this year cannot be entered.

(Signed) W. A. GIB, MAJOR,
Deputy Conservator of Forests.

APPENDIX. R

ASSISTANT CONSERVATOR'S OFFICE,
NELAMBUR, 24*th May* 1865

From J. FERGUSON,
Assistant Conservator of Forests.

To CAPTAIN R. H. BEDDOME,
Conservator of Forests.

SIR,

I have the honor to forward the Administration Report of the Nelambur Forests for the year 1864-65.

I. *Plantations.*

Work done

	Acres.
Planted	106
Weeded	2,000
Above three lacs of trees pruned... ...	340
Saplings cut in thinning	40,000
Jungle felled and burned for fresh planting ...	110

Timber felled.

Logs dragged to River banks	936	Candies 1,000.
Do. not dragged	170	

II. *Depôt.*

Logs floated	1,550	Candies 2,300
Saplings	12,500	
Bamboos	7,281	

III. *Financial results for the year* 1864-65.

	Rs.	A.	P.
Receipts	... 27,158	11	10
Disbursements	... 16,039	2	5
Balance Rupees	.. 11,119	9	5

IV. *Memo. of timber unaccounted for.*

Value of timber unaccounted for brought from last year's account.	.. 35,000	0	0
Add timber felled during 1864-65... ...	.. 34,000	0	0
	69,000	0	0
Total Rupees ..	69,000	0	0
Deduct sold in 1864-65 . . .	26,753	1	5
Value of timber supplied to the P W. D, Calicut .	405	10	5
Sales, Total Rupees. .	27,158	11	10
Balance..	41,841	4	2

Particulars of balance, Stock in Depôt

139 Teak logs valued at Rupees ...	4,400	0	0
279 Kurmurdah ... „ ...	1,600	0	0
118 Saplings ... „ ...	354	0	0
	6,354	0	0

Stock in forests.

		Rs	A.	P.				
340 Teak logs	valued at ..	... 10,000	0	0				
254 Kurmurdah	do. ...	... 2,487	4	2				
104 Poo-Murd	do. ...	.. 800	0	0				
400 Ben teak	do. ...	.. 2,200	0	0				
					15,487	4	2	
50,000 Saplings	do ...	...			20,000	0	0	
								41,841 4 2

V. *Nellicotta Forest*

Nellicotta Forest leased from the Zamorin of Calicut is distant 11 miles from Nelambur, contains about 1,800 acres of forest land with a meagre crop of timber at present, but in previous years it must have been richly stocked, about 200 promising young teak trees from 20 to 30 years growth with a few straggling trees a little older, a few good Venteak, Errul, and Kara Murda, the remains of a splendid crop of timber. From 800 to 1,000 acres are most eligible for planting Teak, consisting of strong clay, black loamy mould and alluvial deposit soils, all well adapted to the growth of Teak, with good water carriage situated on the bank of the Poona river on which timber is regularly floated; it joins the main river 3½ miles above Nelambur.

Nellicotta, although a desirable site for planting, is at some seasons very unhealthy, and few people live in the locality to draw from; it might be well to make trial of opening a small portion yearly either as part or in addition to operations at Nelambur. All Government land within three miles of this place has been planted, and each succeeding year increases the distance, so that ultimately operations will be too distant from head quarters to allow the establishment to go and return daily, at present it may not be judicious to alter the existing mode of operations, but considering that Government is desirous of extending the area of Teak the above idea may be kept in view and carried out as opportunity offers.

VI. *General Remarks.*

Owing to the unprecedented severity of the monsoon or some other cause this year fever has been very prevalent and deadly; the greater part of the establishment suffered more or less, two Peons died and others have left not likely to return.

The monsoon opened unusually severe, damaging crops and fields, then stopping as suddenly prevented cultivation, thereby raising provisions to famine prices, as well as stopping the growth of seedlings planted out, at its commencement they did very well, but the continued drought this season checked their growth (seven months without a shower) and left them quite leafless till a few weeks ago when the mango showers fell which revived them to fresh life and vigour, and are now throwing out leaves and shoots beautifully.

With floating operations this year we have been more successful than last, and I am glad to say at the request of the Collector the late Native Conservator Chatoo Menon undertook the superintendence, assisted by the Tahsildar (of Ernaud) and his Adigharis, in procuring raftsmen to float our stock of timber and saplings for the season, but owing to the scarcity of raftsmen and water, the latter part of the season were enabled to float the whole. Government cannot fail to see the difficulty of executing work either expeditiously or satisfactorily when all the influence brought to bear on the subject has not been completely successful.

The timber depôt has not succeeded to our wishes, combination of merchants and other local difficulties to contend with makes up-hill work, but ultimately it must prove remunerative, and all the more from the present Clerk Mr. Cabral having his salary raised (by sanction of Government) from 15 to 40 Rupees per mensem, and from his long experience in the same depôt nder the Bombay Government (25 years) a good result may be expected.

The first Clerk appointed was sentenced by the Magistrate to a long imprisonment and fine for fraud, caused no doubt by the small salary allowed in a post that involves considerable responsibility, the temptation was very great, and in fact none of my establishment are paid sufficient salary for the work they have to perform.

I am continually put to great inconvenience, never being able to have a good Writer, the unhealthiness of the place combined with the smallness of the salary deters really good men from taking appointment as well as the high rates obtaining here. I would respectfully venture to recommend Government to give a small increase to the establishment generally, and more especially the Writer and Duffadars, a little "reward sweetens labour."

We have had another case of robbery this season; one of the depôt Peons detected 50 of our first class saplings in the river at Beypore and reported the case to the Writer, and he to the Magistrate's office, who at once took it up, and on making enquiries found as many more, in all 103 saplings were recovered, which had been extracted from the rafts in course of transport from forest to depôt. I have not heard of the case being decided although the saplings were found, yet there has not been sufficient evidence to convict the parties suspected, but surely the Peon ought to be rewarded.

I have the honor to be,

Sir,

Your most obedient servant,

(Signed) J. FERGUSON,

Assistant Conservator of Forests.

No. 617. Read the following letter from the Conservator of Forests :—

Forwarding Report of the Forest Department for 1864-65. } (Here enter 1st May 1865.)

No. 618. ORDER THEREON, 28th November 1865, No. 2,974.

Forests, No. 15.

1. The Administration Report of the Conservator of Forests for 1864-65, shews that his Department continues to work satisfactorily.

2. The subjoined condensed Statement of the outlay, receipts, and stock of timber in the various ranges for 1863-64 and 1864-65, shews the progress that has been made during the year. The result is a net profit for the year of Rupees 1,33,911-6-6, and making the requisite allowances for changes in the market value of timber, an increase of stock in depôt valued at Rupees 68,830.

Ranges.	Charges—Expenditure.		Receipts, Seignorage, and sale of Timber		Value of stock of timber on the 30th April	
	1863-64.	1864-65.	1863-64.	1864-65.	1864.	1865.
	RS.	RS.	RS.	RS.	RS.	RS.
Gumsoor and Surada ..	1,368	1,747	1,480	6,446	.....	.....
Cuddapah	5,560	6,795	21,652	29,164	1,811	3,089
North Arcot	528	1,053	2,572	4,238	.....	.....
Kurnool	3,421	4,903	37,288	39,482	1,659	155
Salem...	14,250	8,820	31,424	40,332	23,200	10,495
South Arcot	360	308	2,316	4,196	.....	.....
Madura	4,442	3,478	3,188	6,383	3,387	4,478
Annamallay	37,214	31,146	37,990	21,032	2,83,047	3,13,767
Chenat Nair	.....	.....	.....	.....	.....	.....
Bolumputty	61	208	175	988	.....	.....
Mudumally	37,292	43,855	15,287	48,847	1,43,304	1,70,284
Segur	14,047	7,523	32,720	27,844	15,986	20,545
Neilgherry	3,643	3,812	4,019	4,984	.....	.....
Australian Plantation	2,259	1,583	154	780	.....	.....
Bhowany	2,637	2,113	6,417	540	.....	5,250
Cöllegal	.....	5,698	.....	17,927	.....	1,516
South Canara ...	9,606	15,984	20,319	21,183	18,878	26,485
Wynad	24,827	15,924	18,655	10,254	27,064	32,236
Hoonsoor	7,475	4,613	1,296	18,791	21,280	17,161
Nellumboor	13,925	16,039	6,691	27,159	35,600	41,841
	1,82,918	1,75,604	2,43,643	3,30,570	5,78,216	6,47,702

3. The Governor in Council notices with pleasure the success which has attended the efforts of the Conservator to establish plantations and nurseries in various parts of the Presidency. The accounts of the Sandalwood nurseries in Segoor, and of the Teak plantations in Nellumbur and the Mudumallay range, are particularly gratifying, and the Australian saplings which have been planted out on the Pulney and Neilgherry Hills, promise an important addition to our supplies of timber and firewood.

4. The Government await with interest further information as to the value of the Sál forests, which have been recently worked in Goomsur, and of the tract of Sandalwood which has been discovered at the north of the Nulla Mallay range.

5. No further observations seem to be called for. The suggestions which are thrown out here and there in the Report, should be submitted separately for orders, if such are desired.

(True Extract.)

(Signed) W. HUDLESTON,

Acting Secretary to Government.

To the Conservator of Forests
" the Board of Revenue
" the Public Works Department

Ed S T Augustin

ERRATA LIST.

Page.	Para.	Line.	
1	6	2,	For "Brinjeer," *read*, Brinjer.
25	9	4,	For "attributed the increase," *read*, attributed to the increase.
27	19	2,	For "I sen," *read*, I sent.

REPORT

OF THE

CONSERVATOR OF FORESTS,

FOR THE

OFFICIAL YEAR

1865-66.

MADRAS:
PRINTED BY GANTZ BROTHERS,
AT THE ADELPHI PRESS, MOUNT ROAD,
1867.

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APPENDIX.

A. List of new or rare plants drawn in the Office of Conservator of Forests in 1865-66.

B. Description of 2 Cuddapah Ebonies and Gumsur.

C. Memorandum on the Government Gardens at Peeramade.

D. Report on Javadi and Yellagiry Hills.

E. Report on the Nelloro Plantations by Dr. Cleghorn.

F. Cuddapah and North Arcot Forest Report.

G. Kurnool Forest Report.

H. Madura Forest Report.

I. Mudumallay Forest Report.

K. Seegur and Suttiamungalam Forest Report.

L. Neilgherry Sholas Forest Report.

M. Wellington Australian Plantation Forest Report.

N. Bhowany Forest Report.

O. Collegal Forest Report.

P. Salem Forest Report.

Q. South Canara Forest Report.

R. Wynaad Forest Report.

S. Nellumbur Forest Report.

T. Gumsur and Surada Forest Report.

N. B. The appendices C, D and E having already been printed in the Proceedings of Government, dated respectively 21st February 1866, No. 468, 15th May 1866, No. 1154, and 17th May 1866, No. 1173, and their re-production in this printed Report seems unnecessary, and they have therefore been omitted.

OFFICE OF CONSERVATOR OF FORESTS,
CAMP COIMBATORE, *20th June* 1866.

From

CAPTAIN R. H. BEDDOME,
Officiating Conservator of Forests.

To

W. HUDLESTON, ESQ.,
Acting Secretary to Government, Revenue Department,
Fort Saint George.

SIR,

1. I have the honor to forward the Annual Report of my Department for 1865-66.

2. In June the Officiating Conservator visited the Anamallays, the Madura District and establishment, and the Salem District; in July he inspected the Australian plantations at Wellington, the Mudumallay forests and plantations, and the building timber and firewood plantations on the Nilgiris, and in September he visited the Nellumbúr teak plantations. On the 4th of November Dr. Cleghorn arrived at Mangalore from England, and took over charge and remained in office until the end of the official year, during which period he visited the Southern part of the Tinnevelly District, and the Cumbum valley and Pulney Hills in the Madura District, the Anamallay establishment in the Coimbatore District, and the Australian plantations on the Nilgiris, the Collector's planting operations near Nellore, and the Red Sanders plantation in the Cuddapah District. During December the Officiating Conservator (then Travelling Deputy) went a complete tour through the Wynaad forests, and in January and February he inspected all the forests and plantations in the South Canara District; towards the end of February he took charge, temporarily, of the Anamallay forests, as Lieutenant Bennet, the officer in charge, was obliged to go off suddenly on sick certificate.

3. GOOMSUR AND SURADA.—Mr. MacCally, Overseer of these forests, has (agreeably to the orders of Government,) stored at Gopalpore about 1,000 logs of Sâl and a few of Sohn (red cedar or Soymida febrifuga,) for transport to Madras, with the view of their being tested in the Engineer's Department and in the Gun Carriage Manufactory. A warrant officer deputed to select logs for the Gun Carriage Department proceeded lately to Gopalpore, but he has selected only 20 logs out of the 1,000, and reports that the remainder are not of a scantling, adapted for Gun Carriage purposes. The value of this timber can be ascertained on the arrival of these logs at Madras, and a special report will be submitted to Government as to the best way of disposing of the remainder.

4. *Felling.*—A considerable quantity of Sâl and Sohn has been felled during the year, a portion of this has been supplied to the Department Public Works, and the rest is stored in the forests and at Gopalpore. The Overseer experienced much difficulty in procuring labor and carts, owing to the famine, combined with the prevalence of Small-pox and Cholera at Russelcondah and the villages in the vicinity of Gumsur.

5. *Buildings.*—A temporary shed was erected at Gopalpore, in which the Sohn logs are being seasoned, as they are liable to crack and warp much on exposure to the sun when fresh felled.

6. *Clandestine felling.*—Much clandestine felling is carried on by the holders of the Brinjeer lands and Hill people to the west of Russelcondah, and our seignorage collections are considerably affected thereby. The Collector has been addressed on the subject.

7. *Cause of deficit.*—As hardly any of the Sâl logs have as yet been sold, there is a considerable deficit against the forest.

8. *Financial Results.*

Expenditure.

Establishment			1,896	15	2
Working charges			6,843	5	10
				8,740	5 0

Receipts.

Seignorage, &c			2,655	9	9
Deficit against forest			6,084	11	3
Value of timber on hand, 30th April 1866, 18,540 cubic feet of Sâl and Sohn			7,510	0	0

9. GOLCONDAH HILL FORESTS.—These tracts have been brought under conservancy since October last, with a small establishment as per margin, sanctioned in G. O. dated 28th September 1865, No. 2349, and they are worked under the immediate orders of the Agent and Collector of Vizagapatam. According to the report furnished by Mr. Carmichael, the Collector, these forests form an area of about 60 miles by 80; the whole is densely wooded and contains no private forests whatever. Mr. Morston, the Overseer at first appointed by the Agent, has resigned, and a Mr. Leonard has now been nominated. Operations can hardly be said to have fairly commenced, and the resources of the forest have not been explored; it is proposed to keep them chiefly under the License system, but the department is to fell and store timber in a depôt at Nursapatam. The Officiating Conservator hopes to explore these forests during the next cold season, when they are comparatively healthy.

	Rs.
1 Overseer	60
Do. Travelling allowance	15
4 Peons @ 6 Rs. each ...	24
Total...	99

10. CUDDAPAH.—*The Dhoor Forests.*—The forests of this taluq were taken over by our department on the 1st of May, agreeably to G. O. dated 30th March 1865, No. 693.

11. *Plantations.*—Dr. Cleghorn visited the Red Sanders plantation near Codoor, and was much pleased with it: the growth of the timber plantations at Balpilly is not satisfactory.

12. *Depôts.*—Both the Ordnance Department and the Railway have been supplied with timber from our depôts.

13. *Confiscations.*—Rupees 181-8-6 was realized during the year by the sale of confiscated timber, the seizures occurred chiefly in the Dhoor forests, which have just been taken over.

14. *Financial Results.*

Expenditure.

Establishment			4,091	8	0
Working charges			3,131	13	0
				7,223	5 0

Receipts.

Seignorage			26,404	10	1
Sale of timber from depôts			778	8	8
Timber supplied to Public Departments			128	12	0
Sale of confiscated timber			181	8	6
				27,493	7 3
Balance in favour of forest				20,270	2 3
Value of timber in depôt on 30th April 1866			7,041	15	11
Deduct value on hand on 30th April 1865			3,089	8	0
Add surplus stock of timber				4,952	7 11
Financial result for 1865-66				25,222	10 2

15. KURNOOL.—*Charcoal tax.*—A small tax of one anna per cavady load has been levied on charcoal with the sanction of Government. There are a great many forges in the district which consume a very large amount of charcoal and firewood; the tax is evaded to a great extent, and the collections of it is of much trouble. It would be preferable if these forges paid a small monthly tax each, and the Officiating Conservator is in communication with the Collector on the subject.

16. *Decrease in Revenue.*—This is attributable to the stoppage of all the works of the Irrigation and Canal Company, and also to large sales of timber from different Puttah lands.

17. *Departmental working.*—The forests of the Nullay Mullays are likely to become of such value, that they should be brought, if possible, under systematic conservancy and departmental working. Mr. Sheffield's plan (vide his report) of working all reserved timbers, and leaving the unreserved kinds under the License system, is worth consideration, and will receive the attention of the Officiating Conservator when he next visits the district.

18. *Yerra Mallays.*—These hill forests are under the jungle conservancy establishment; Mr. Sullivan, the Acting Collector, is of opinion that they should be placed under the Forest Department, but as he is only acting in the district, he does not wish to recommend their transfer.

19. *Australian Tree Seeds.*—Seeds of 3 Australian Acacias (viz., Acacia Lophantha, Melanoxylon, and Dealbata) which thrive so well on the Nilgiris, were forwarded for trial on the Nullay Mullays; they came up, but it is feared that they will not answer: the plants of A. Lophantha have all died, and the others are not showing a healthy growth.

20. *Departmental buildings.*—The construction of a small office and store room with quarters for the Overseer, sanctioned in G. O. dated 31st July 1865, No. 1767, at a cost not exceeding Rupees 500, has been completed within the sanctioned amount.

21. *A Gumastah attached to the Tahsildar's office not found necessary.*—The services of the Gumastah employed in the Tahsildar's office have, with the concurrence of the Collector, been dispensed with, that office having to a great extent been relieved from forest work.

22. *Buffaloes.*—Several pairs have been purchased for forest operations, and have been of great use in bringing timber out of the forest to the depôt, and in collecting together confiscated timber.

23.—*Confiscations.*—Illicit felling still continues, and the sales of confiscated timber have realized Rs. 2,168-1-3.

24. *Financial Results.*

Expenditure.

Establishment			5,810	6	1
Working charges			3,841	13	0
Total expenditure					9,652	3	1

Receipts.

Seignorage collections			29,710	2	2
Sale of timber from depôt			1,793	1	6
„ confiscated timber			2,168	1	3
Total receipts					33,671	4	11
Balance in favour of forest					24,019	1	10
Value of timber in depôt on 30th April 1866			1,471	4	0		
Deduct value on 30th April 1865			155	0	0		
Add surplus stock of timber					1,316	4	0
Financial result for 1865-66					25,335	5	10

25. North Arcot.—Portions of the forest in the Vellore and Chendragherry taluqs of this district, being under the Collector's department, make our conservancy arrangements difficult, and cause an opening for smuggling.

26. *Bamboos.*—The abolition of the seignorage upon this article considerably affected the revenue of this district. Immediately the tax was taken off, most extensive felling commenced; the seignorage is to be re-imposed, and the Conservator is in communication with the Collector on the subject.

27. *Depôt.*—A depôt has been formed, and arrangements are being made to keep a regular supply of timber to meet any sudden demands.

28. *Confiscations.*—These have been very trifling during the year.

29. *Financial Results.*

Expenditure.						
Establishment	2,004	0	0			
Working charges	388	3	4			
				2,392	3	4
Receipts.						
Seignorage	5,553	10	9			
Sale of depôt timber	45	13	4			
Confiscations	20	8	5			
				5,620	0	6
Balance in favour of forest				3,227	13	2
Add value of timber in depôt on 30th April 1866				704	3	4
Results for the year				3,932	0	6

30. South Arcot.—These forests are under the officer in charge of the Salem range; the seignorage collections amount to Rupees 2,828-4-9, and the expenditure to 360, which leaves a balance in favour of the forests of Rupees 2,468-4-9, which is favourable, considering that the seignorage on Bamboos (which was formerly a great source of revenue) has been removed.

31. Madura.—*Demarcation necessary.*—The Zemindars who own forest tracts in this district have refused to lease them to Government, a demarcation of all Government forests is much required.

32. *Operations.*—As there has been a very limited demand for timber during the year, the departmental felling operations have been very limited. 647 bandy loads of reserved and 231 of unreserved timbers have been given on license, and the seignorage collections have been Rupees 4,323-9-10 for this year, against Rupees 2,149-15-5 for 1864-65.

33. *Depôt, Timber.*—Rupees 1,788 have been realized by sale of timber from depôt.

34. *Timber, free of tax.*—490 bandy loads of timber have been granted on free license to ryots

35. *No demand for timber from Government Departments.*—The Department Public Works have not indented upon us for any timber during the year.

36. The Wastrap and Vasadavalanur forests.—The forests of Wastrap and Vasadavalanur will, agreeably to G. O. dated 2nd May 1866, No. 1033, be placed under the officer of the Madura range.

37. *Financial Results.*

Expenditure.

Establishment	3,275	0	0
Working charges	2,323	8	6
Total	5,598	8	8

Receipts.

Seignorage and sale of timber	6,529	5	3
Balance in favour of forest	930	12	9
Value of timber on hand, 30th April 1865	4,478	0	0
Add felled during 1865-66	115	1	8
	4,593	1	8
Deduct sold	1,788	1	9
Balance on hand, 30th April 1866	2,804	15	11

38. TINNEVELLY.—At Dr. Cleghorn's recommendation, a small establishment of Rupees 50 has been sanctioned for the Alwariouriohy forests in the southern portion of the Tinnevelly District. Mr. MacGregor, the Acting Sub-Collector, has now reported through the Collector, to the Board of Revenue, that there are other blocks of forest south of Courtallum, for which a small establishment is necessary.

39. ANAMALLAYS.—*Operations.*—Little or no felling took place during the year; carting, slipping, and floating were carried on as usual.

40. *Loss by Fires.*—Most disastrous fires occurred in the dry season. 450 fine dock-yard planks had unfortunately been stacked at the head of the timber slip, and these were burnt to ashes; the fires also took hold of all the depôts throughout the forest, owing to their not having been cleared as usual; many of the forest bridges, which are built of timber, were also burnt. A separate report was forwarded to Government by Dr. Cleghorn on the subject. The Deputy Conservator was unwell and absent from his work, and the Head Overseer was employed on other duty, and no proper arrangements seem to have been made to have the depôts secured from the annual fires.

41. *Cause of a deficit.*—With the exception of a small amount of timber, supplied to the Gun Carriage Department and Department Public Works, there have been no sales during the year, and an enormous stock of timber valued between two or three lakhs still remains unsold, hence the smallness of the receipts. An auction was held at Ponany in February, but there were no bidders, except a few native merchants, who combined to keep down the price, so that the sales were stopped. It is intended to hold large auctions this year, and to give notice several months beforehand.

42. *Lieutenant Foord appointed to act as Superintendent.*—Lieutenant Foord has been appointed to act as Superintendent of this range during Lieutenant Bonnet's absence on sick certificate.

43. *Expiration of the Lease.*—The lease of the Nambiddy's portion of these forests expires on the 1st of January 1867, the subject of renewal is now under the consideration of Government.

44. *Financial Results.*

Expenditure.

Establishment	10,416	3	2			
Working charges	18,028	8	3			
Total				28,444	11	5
Receipts				11,184	2	11
Deficit				17,260	8	6
Value of timber on hand	2,81,904	6	10			

45. CHENAT NAIR AND BOLAMPUTTY.—The Chenat Nair and Bolamputty forests form a valuable belt along the foot of the mountains, partly in Coimbatore, and partly in Malabar: the Railway Company had a lease of the former forests, which expired on the 31st of December 1865. It was then proposed to work this belt partly on the license system, and partly by the department; and a small establishment was authorized by this Government, pending final sanction of the Government of India, to whom the information required as to the resources and revenue of these forests has just been afforded by the Conservator, in his letter communicated to them by this Government in G. O. dated 1st June 1866, No. 1288. Owing to the illness of the Anamallay Superintendent, in whose range these forests are situated, little or nothing has as yet been done, as an officer has just been appointed to this range, it is now intended to bring them under systematic working. The expenditure for the year, including establishment, has been Rs. 1,097-5-9, and the receipts Rs. 361, showing a deficit of Rs. 736-5-9, but there is timber in depôt to the value of Rs. 2,317.

46. MUDUMALLAY.—*Increase to establishment.*—A small establishment of a duffadar and 2 peons at a monthly cost of Rupees 33 has been sanctioned, (vide G. O. 1897 of 15th August 1865,) for the Teak plantation.

47. *Operations.*—42,041 cubic feet of Teak have been felled and stored in depôts; 9,725 square feet of timber have been sawn at Mudumallay, and 4,292 square feet at Ootacamund. Elephants have dragged from the forest to the road 84,253 cubic feet. By the establishment carts, 12,101¼ cubic feet of teak have been carted to Ootacamund, and 23,005¼ cubic feet have been carted from the forest depôts to the Karkanah at Mudumallay. Contractors have carted to Ootacamund 30,044¾ cubic feet and from the forest to Mudumallay 5,723¾ cubic feet.

48. *Sales.*—Rupees 9,533-0-5 represents the amount of sales to the public. Rupees 57,028-12-10 is the value of timber supplied to the Lawrence Asylum and the Department Public Works.

49. *Licenses.*—324 Vengay trees have been sold on license: the demand for jungle wood is not great at present.

50. *Plantations.*—The Teak plantations have made very fair growth; 15,000 pits are now ready for this year's planting, and many thousand seedlings are ready in the nursery for transplanting.

51. *Plant.*—A large quantity of plant in the shape of carts and bullocks has been purchased during the year.

52. *Financial Results.*

Expenditure.

Establishment			161,043	6	2	
Working charges			48,847	12	8	
Total					64,891	2 10
Receipts					67,570	11 6
Balance in favour of forest					2,679	8 8
Balance of timber on hand, 30th April 1865			1,70,284	6	0	
Add felled during the year			1,11 737	14	9	
			2,82,022	4	9	
Deduct sold during 1865-66			66,561	13	3	
Balance on hand, 30th April 1866			2,15,460	7	6	
Add surplus stock of timber					45,176	1 6
Financial result for 1865-66					47,855	10 2

53. SEEGUR AND SUTTIAMUNGALUM.—*Operations.*—12,961 maunds of Sandalwood (valued at Rs. 40,207-13-7) have been felled during the year.

54. *Sales.*—Rupees 26,967-8-5 is the amount of timber sold to the public, no timber has been supplied to Government departments.

55. *Licenses.*—Rupees 1,229-9 0 have been realized from Licenses which have been chiefly issued for Vengay ; the removal of the Bamboo seignorage caused a considerable loss.

Confiscations.—There have been none during the year.

56. *Sandal Plantations.*—Experiments are being made in planting under shelter.

57. *Financial Results.*

Expenditure.

Establishment			2,184	7	0	
Working charges			9,369	12	0	
Total					11,554	3 0

Receipts.

Sale of timber from depôts			26,967	8	5	
Licenses, &c			1,301	9	0	
Total					28,269	1 5
Balance in favour of forest					16,714	14 5
Balance of timber on 30th April 1865			20,545	8	9	
Add felled during 1865-66			40,207	13	7	
Total			60,753	6	4	
Deduct sold during 1865-66			26,967	8	5	
Balance of timber on hand, 30th April 1866			33,785	13	11	
Add additional stock of timber					13,240	5 2
Results for the year					29,955	3 7

58. NILGIRI SHOLAS.—*Davie Shola.*—Mr. Money who purchased this Shola is not carrying out the terms of his agreement with Government, otherwise we should have a large amount of timber stacked. Two fires have moreover occurred and destroyed a large amount of wood.

59. *Confiscations.*—Major Morgan reports that much illicit felling is carried on, and that the Sub-Magistrate only punishes such like thefts by simple confinement for 6 or 8 hours, under these circumstances smuggling will always be rife.

60. *Sales.*—Rupees 3,055-10-0 represents the value of timber sold on license to the public, and Rupees 845 the value of timber supplied to Government departments.

61. *Plantations.*—These are succeeding well ; our Eucalyptus (or building timber), plantation suffered considerably in the very severe frost which we experienced at Christmas, 3,700 young trees have been planted out, and 10,260 have been mossed prior to planting out, 47,000 plants are in the nursery beds, and 5,722 yards of trenching have been completed for this year's planting.

In the Acacia (or firewood plantation,) 15,480 Acacias have been put out and 8,198 have been mossed ready to plant out. The nurseries contain 26,200 Acacias and 1,700 Eucalypti.

62. *Cause of the deficit against the forests.*—The financial results are not favourable; the chief cause is that a very large amount of Shola land has been sold to the public lately, and they supply the market with firewood much to our detriment; large sums have been spent on plantations.

63 *Financial Results.*

Expenditure.

Establishment			1,848	11	6
Working charges			4,116	11	8
Total				5,965	7 2

Receipts.

Sale of wood			3,055	10	0
Timber supplied to Department Public Works			845	0	0
Total				3,900	10 0
Deficit against forest				2,064	13 2

64. AUSTRALIAN PLANTATIONS.—*Sales.*—Poles to the value of Rupees, 544-8-0 have been supplied to the public from the plantation, and 20 Rupees' worth have been supplied to Government departments. The sales from the plantation have been small, owing to much timber from coffee plantations and other clearings having been thrown into the market.

65. *Planting.*—10,800 Acacia trees have been planted out, and 400 Eucalypti. 5,000 Acacias, and 3,000 Eucalypti have been potted ready for transplanting, and 10,000 Acacias are in the nursery.

66. *Financial Results.*

Expenditure.

Establishment			484	8	0
Working charges			1,683	13	3
Total				2,168	5 3
Receipts				564	8 0
Balance against forest				1,603	13 3

67. COLLEGAL—*Explorations.*—The Vengay and Achà wood forests, as well as the Sandalwood tracts have been thoroughly explored during the year.

68. *Operations.*—4,310 maunds of Sandalwood and a small amount of other timbers have been felled during the year. There is not at present any demand in Collegal for timber, but if a market can be got, the Achà and Vengay of these forests will yield a considerable revenue.

69. *Seignorage*—The collections under this head only amount to Rupees 765-0-7

70. *Confiscations.*—Considerable confiscations have been made during the year, but Major Morgan reports that the Tahsildar invariably refuses to commit the cases brought to his notice.

71. *Sales.*—Timber (almost entirely Sandalwood,) to the amount of Rupees 16,036-2-10 has been sold to the public. Rupees 34-3-6 represents the value of timber supplied to Government departments.

72. *Plantations.*—A site has been selected and operations will be commenced this season.

73. *Financial Results.*

Expenditure.

Establishment			2,371	14	4
Working charges			3,802	5	3
Total				6,174	3 7

Receipts.

Sale of timber				16,036	2	10
Seignorage, &c				765	0	7
Confiscations				17	3	0
Timber supplied to Government				34	3	6
Total						16,852 9 11
Balance in favor of forest						10,678 6 4
Value of timber on hand, 30th April 1865				1,516	8	0
Add felled during 1865-66				19,378	3	8
				20,894	11	8
Deduct sold during 1865-66			16,070	6	4	
Do destroyed by fire			273	12	0	16,344 2 4
Balance of timber on hand, 30th April 1866				4,550	9	4
Add surplus stock						3,034 1 4
Results for the year						13,712 7 8

74. BHOWANY.—*Operations.*—4,279 maunds of Sandalwood (valued at 14,920-14-6) have been felled and stored during the year.

75. *Sales.*—Timber to the value of Rupees 14,170-14-6 has been sold to the public; no timber has been required by Government departments.

76. *Licenses.*—Timber to the value of 606-12-8 has been sold during the year on license.

Confiscations.—There have been none during the year.

77. *Communications.*—Rupees 5,000 are to be transferred from the Forest Funds for the opening out of the Burghoor ghat (vide G. O. No. 2849, 21st November 1865). The opening of this road will, no doubt, be of great use to the Forest Department; but as the public will also be generally benefitted, the whole expense should not fall on the Forest Budget.

78. *Financial Results.*

Expenditure.

Establishment				2,357	6	4
Working charges				5,548	5	4
Total						7,905 11 8

Receipts.

Sale of timber from depôt				14,170	14	6
Seignorage				606	12	8
Total						14,777 11 2
Balance in favor of forest						6,871 15 6
Timber in depôt on 30th April 1865				5,250	0	0
Add felled during 1865-66				14,920	14	6
Total				20,170	14	6
Deduct sold during 1865-66				14,170	14	6
Balance of timber on hand, 30th April 1866				6,000	0	0
Add surplus stock of timber						750 0 0
Financial Results for 1865-66						7,621 15 6

79. SALEM.—*Lieutenant Walker assumes charge.*—Lieutenant Walker assumed charge of these forests on the 25th of May, he works well with the Revenue Authorities, and has shown great energy in bringing his establishment into good working order.

80. *Illicit felling.*—The Deputy Conservator, in paras. 1 and 12 of his report, remarks upon the great want of a Forest Act. The Collector of the district does not consider himself entitled to punish forest theft under the Penal Code, consequently smugglers often escape with only the loss of the wood which they have clandestinely felled, he reports moreover that this conduces to the idea that the Forest Department is not supported by the Collectors of the district.

81. *Javadi and Yellaghiry hills.*—The Deputy Conservator has partly explored these hills, and his report has been recorded in G. O. 1st May 1866, No. 1,173. The Sandalwood on these hills has been under conservation for several years, and as some of the trees are now ripe, felling operations have commenced. Arrangements are being made to have certain tracts of forest land on these hills properly demarcated and strictly reserved.

82. DENKINACOTTAH AND PENNAGARA FORESTS.—The repairs of the road from Denkinacottah is being commenced by the Department Public Works at the expense of the Forest Department; the outlay will be about 5,000 or 6,000 Rupees, but will enable us to bring much valuable timber to a good market. Lieutenant Walker is going to introduce departmental working in these forests, and has proceeded there to supervise operations personally.

83. *Private Forests.*—The forest lands on different Jagheers and Mootahs in this district give rise to a considerable amount of smuggling and loss of revenue; it would be very beneficial if these tracts could be rented by Government at a fair sum,—the Collector has been addressed on the subject

84. *Locomotive fuel.*—There is a large consumption of this article in the Salem district, and much has probably been smuggled from Government forests on the plea that it has been cut in private forests. The Deputy Conservator has made arrangements with the Locomotive Superintendent, that, in future, the Railway Departments are to pay the seignorage on all firewood supplied by contractors; he has also made arrangements to regulate the felling; he is probably rather too sanguine in his estimates of receipts under this head.

85. *Confiscations.*—Rupees 1,286 has been realized by the sale of confiscated timber during the year.

86. *Sandalwood operations.*—The quantity of Sandalwood received into store during the year amounts to 1,501 maunds. 2,713 maunds were sold during the year and realized Rupees 10,292-5-7.

87. *Timber given on Licenses.*—3,703 bandy loads of timber have been given on license during the year.

88. *Babul plantations.*—Ground is being prepared near the Mullapooram Railway station for an extensive firewood plantation of Babul (Acacia Arabica.)

89. *Jungle products, dyes, &c.*—The Deputy Conservator points out in his report, that it is only the merchants, and not the hill tribes, who gain anything by the discontinuance of all seignorage on, or departmental collection of jungle products.

90. *Bamboo seignorage.*—The removal of the seignorage upon Bamboos, soon after the commencement of the official year, caused a loss of about 6,000 Rupees in the revenue. It caused also an enormous quantity of this article to be cut for export into the Mysore territory.

91. *Financial Results.*

Expenditure			12,205 14 9
Receipts			34,734 4 3
Balance in favor of forest			22,528 5 6
Value of timber on hand, 30th April 1865	10,495 0 0		
Add felled during 1865-66	5,542 10 1		
Total	16,037 10 1		
Deduct sold during 1865-66	10,292 5 7		
Value of timber on hand, 30th April 1866*	5,745 4 6		

The actual profit is Rs. 8,983-15-5 less than that of 1864-65, but the out-turn is satisfactory, when it is explained that an officer has been in charge throughout the year, instead of a Sub-Assistant Conservator; and the removal of the seignorage on Bamboos has caused an unexpected loss.

92. SOUTH CANARA.—During January and February, the Officiating Conservator (then Deputy Conservator) went a complete tour through the forests of this district.

93. *Depôts.*—Four large coast depôts have now been formed, viz., at Cundapore, Barcoor, Mangalore and Cassergode; as timber does not meet with a fair sale inland, all timber will, in future, be brought to these coast depôts.

94. *Operations.*—Felling, dragging and floating, have been carried on in the forests of the taluqs of Oodapee and Soobramoney. In the young Teak forests of Sooliah and Maloot 25,508 Teak saplings have been pruned and cleared of all creepers and underwood.

95. *Elephant labor.*—Large sums are paid in this district for elephant labor; a sum of Rs. 8,000 was sanctioned by Government for the purchase of elephants, but animals are not procurable at present.

96. *Plantations.*—The Teak plantations near Sooliah are a great success, and the plants show a growth almost equal to those of Nellumbur.

97. *Cause of the decrease in the Revenue.*—The License system has been abolished, and departmental working has been introduced, this has had the immediate effect of lessening our receipts, but the forests are brought under more systematic conservancy; and when the working of our depôts comes into play, the revenue will also gain by the new arrangement. The Collector has taken over the firewood jungles of the district, and the seignorage on Bamboos was suspended, both which causes tended to lessen the receipts for the year.

98. *Financial Results.*

Expenditure.			
Establishment	7,441 3 8		
Working charges	10,746 14 0		
		18,188	1 8
Receipts.			
Sale of timber, &c		17,269	1 7
Balance against forest		919	0 1
Timber on hand, 30th April 1865	26,884 14 11		
Add felled during 1865-66	9,237 12 0		
Total		36,122	10 11

*N. B.—Besides this, Sandalwood to the value of Rupees 6,500 has been prepared, but as has not yet been brought to depôt, it is not entered in the accounts.

Deduct sold during 1865 66.... 4,312 1 0 Do. destroyed by white ants, &c. 154 12 0		4,466 13 0
Value of timber on hand, 30th April 1866...		31,655 18 11
Deduct timber on hand, 30th April 1865.....		26,884 14 11
Surplus stock.....		4,770 15 0
Deduct deficit.....		919 0 1
Results for the year.....		3,857 15 0

99. WYNAAD.—*Change of Superintendents.*—Major Gib resigned his appointment on the 1st of August 1865, and Lieut. Fullerton was appointed a 3rd Class Deputy Conservator, and assumed charge of this range on that date.

100. *Operations.*—20,461½ cubic feet of timber has been cut during the year. 22,652½ cubic feet removed from forest to depôts.

101. *Kumri.*—A small portion of forest land near Sultan's Battery has been cleared for Kumri, the matter was reported to the Deputy Collector, who has taken measures to prevent a similar occurrence.

102. *Financial Results.*

Expenditure.			
Establishment.....	9,559 3 9		
Working charges.....	10,966 13 11		
Total.....		20,526 1 8	
Receipts.			
Sale of timber.....	29,303 9 6		
Timber supplied to D. P. W.....	3,347 2 6		
Total.....		32,650 12 0	
Balance in favor of forests.....		12,124 10 4	
Timber in depôt on 30th April 1865.....	34,648 0 0		
Add timber felled during the year.....	21,839 15 3		
	56,487 15 3		
Deduct sold.....	25,793 2 3		
	30,694 13 0		
Balance of Hunsur timber on hand.....	10,357 7 9		
Total.....	41,052 4 9		

Of this amount timber to the value of Rupees 6,692-0-7 has been sold, but as it was not paid for during the year, it is entered as timber on hand.

103. NELLUMBUR.—*Operations.*—55,000 teak saplings have been planted out in 55 acres.
2,500 acres weeded.
420 acres pruned.
100 acres of ground got ready for this year's planting.
1,000 logs of different timbers felled, and 760 of the same dragged to river's bank.
35,000 teak saplings felled in thinning and 22,000 of the same collected.
986 logs of timber, 25,000 saplings and 8,000 bamboos transported to depôt.

The planting this year was only about half the average amount, the cause of this was a want of plants as the seed in the nursery beds did not germinate properly, owing to a great want of sun during the months of April and May.

104. *Cause of a deficit against the Forest.*—The Assistant Conservator attributes this to the depressed state of the Bombay market, and also to the fact of a merchant having purchased a large amount of timber and having failed to fulfil his agreement.

105. *Financial Results.*

Expenditure.

Establishment			5,025	0	9
Working charges			13,048	9	11
Total				18,073	10 8

Receipts.

Sale of timber, saplings, &c.				14,621	7 11
Balance against the forest			3,452	2	9
Timber on hand, 30th April 1866		49,899	12	3	
Do do 1865		41,841	4	2	
Additional stock of timber			8,058	8	1
Add timber sold but not paid for			766	8	0
			8,825	0	1
Deduct deficit against forest			3,452	2	9
Financial result for 1865-66			5,372	13	4

106. *Forest Act.*—A Forest Act has been published for the Bengal Presidency, but it has not yet been made Law in Madras. Several Collectors of districts have asked for it, and do not consider themselves legally entitled to punish thefts and mischief in Government forests without it, offenders therefore constantly get off with the simple confiscation of the wood felled; this is becoming generally known, and it is to be feared that clandestine felling is on the increase.

107. *Contract Law.*—A Contract Law is much required and losses under the advance system will always be considerable until there is one. As the law stands at present, contractors can take advances without intending or ever attempting to perform work, when the period of their contract has expired, they can be apprehended by a warrant (if they are to be found), and if they then agree to refund the amount or to perform work, (the option is given to the plaintiff,) they cannot be punished; the consequence is, that parties often take advances simply to get the money for a certain period without interest, others after they have received advances from the Forest Department, go off to work out some old advance received from Coffee planters or others.

108. *Gumsur Sál and Cuddapah Ebonies.*—Drawings and descriptions of the Sâl tree of Gumsur (Shorea robusta) and of the two ebonies (Diospyros ebenum and exsculpta) of the Cuddapah and Kurnool forests, are given in Appendix B.

109. *Botanical Drawings.*—Appendix A. is a list of new and rare plants drawn in the office of the Conservator during the official year.

110. *Botanical Publications.*—The publication of the "Ferns of Southern India and Ceylon" has been completed in 20 numbers, and comprises plates and descriptions of 271 Ferns. Twelve numbers of the "Ferns of British India" have been published, containing 180 plates of Ferns from all parts of British India, this work will probably be completed in 3 more numbers. Descriptions and plates of many new plants and trees found on the Anamallay mountains, have been published in the Linnæan Society's Transactions, and a plate and description of a curious tree found on the Nilgiris (Pæciloneuron Indicum) a new genus in the tea tribe, (Ternstræmiaceæ) has been published in the Linnæan Journal.

111. *Financial results for the year.*

Net profit for the year.....	61,778	13	7
Difference in value of timber in depôt, on 30th April 1866, from the amount on the same date 1865..	41,959	3	1
Total Rupees.	1,03,738	0	8

A considerable sum has been expended in planting during the year

I have the honor to be,

Sir,

Your most obedient Servant,

R. H. BEDDOME, CAPTAIN,
Officiating Conservator of Forests

Financial Results of Forest Conservancy Department for 1865-66.

	Name of Forests.	Receipts by sale of timber, &c.			Disbursements including cost of establishment and contingencies.			Balance in favor of Government.			Excess of expenditure over receipts.			Estimated value of wood stored in Depôt.			Remarks.
Ganjam.	1. Gumsur and Surada	2,655	9	9	8,740	5	0	...	...	...	6,084	11	3	7,510	0	0	
	2. Golcondah	27	0	0	409	11	2	...	...	...	382	11	2	...	...	...	
	3. Cuddapah	27,493	7	3	7,223	5	0	20,270	2	3	...	...	...	7,041	15	11	
	4. Kurnul	33,671	4	11	9,652	3	1	24,019	1	10	..	...	...	1,471	4	0	
	5. North Arcot	5,620	0	6	2,392	3	4	3,227	13	2	...	...	...	704	3	4	
	6. South Arcot	2 828	4	9	360	0	0	2,468	4	9	...	...	...	...	...	..	
Coimbatore.	7. Madura	6,529	5	3	5,598	8	6	930	12	9	...	...	...	585	15	11	
	8. Anamallay	11,184	2	11	28,444	11	5	...	..	...	17,260	8	6	2,81,904	6	10	
	9. Chenat Nair and Boleamputty.	361	0	0	1 097	5	9	...	...	...	736	5	9	2,317	(	(	
	10. Mudumallay	67,570	11	6	64,891	2	10	2,679	8	8	...	...	...	2,15,460	7	6	
	11. Seegur and Sattiamangalam	28,269	1	5	11,554	3	6	16,714	14	5	...	...	...	33,785	13	11	
	12. Neilgherry	3,900	10	0	5,965	7	2	...	...	...	2,064	13	2	...	...	.	
	13 Australian Plantation ...	564	8	0	2,168	5	3	...	...	...	1,603	13	3	...	...	...	
	14. Bhowany	14,777	11	2	7,905	11	8	6,871	15	6	...	...	...	6,000	0	0	
	15. Collegal	16,852	9	11	6,174	3	7	10,678	6	4	...	...	...	4,550	9	4	
Malabar.	16. Salem	34,734	4	3	12,205	14	9	22,528	5	6	..	...	...	5,745	4	6	
	17. South Canara	17,269	1	7	18,188	1	8	...	...	...	919	0	1	31,656	13	11	
	18. Wynaad	32,650	12	0	20,526	1	8	12,124	10	4	...	...	...	41,152	4	9	
	19. Nellumbur	14 621	7	11	18,073	10	8	...	...	...	3,452	2	2	49,896	12	3	
	Total...	3 21,581	1	1	2,31,571	3	6	1,22,513	15	6	32,504	1	11	6,89,663	0	2	Timber on hand on the 30th April 1866.
	Deduct general charges.													6,47,703	12	1	Deduct estimated value of timber on hand on the 30th April 1865
														41,959	3	1	Excess of timber obtained during the year.
	Pay of the Conservator of Forest's Office Establishment, travelling and contingent charges, &c.				28,231	0	0										
	Excess of Expenditure over Receipts ...				32,504	1	11	60,735	1	11							
	Actual profit to Government							61,778	13	7							
	Add excess of timber on hand on the 30th April 1866, to that of 30th April 1865 . .							41,959	3	1							
	Financial results for 1865-66 .							1,03,738	0	8							

APPENDIX A.

List of new or rare Plants drawn in the Office of Conservator of Forests in 1865-66.

Ranunculaceæ.

1. Clematis triloba. Heyne.

Anonaceæ.

2. A new genus near Sageræa. (Anamallays.)
3. Saccopetalum tomentosum H. f. et T. (Anamallays.)
4. Xylopia championii. H. f. et. T.

Capparidaceæ.

5. Capparis pedunculosa. (Wall.)

Dipterocarpeæ.

6. Dipterocarpus oblongifolius. Thw.
7. Monoporandra cordifolia Thw.
8. Vateria petiolaris Thw.
9. „ Gardneri Thw.
10. Doona Zeylanica Thw.
11. „ Gardneri Thw.
12. Shorea robusta Roxb.
13. Hopea discolor Thw.

Tiliaceæ.

14. Elæocarpus amœnus Thw.

Celastraceæ.

15. Kurrimia Ceylanica. Arnt.

Sapindaceæ.

16. Nephelium bifoliatum Thw.
17. Pometia eximea H. f. et. T.
18. Hemigyrosa trichocarpa Thw.
19. Schmidelia varians. Thw.
20. Euphoria Gardneri. Thw.

Anacardiaceæ.

21. New genus? near Holigarna.
22. Rhus paniculata. Wall.
23. Tapiria sp.

Guttiferæ.

24. Calophyllum trapezifolium Thw.

Connaraceæ.

25. Connarus—? S. Canara (called Katamara.)
26. Connarus—? S. Canara (called Kar whour bour.)

Leguminoseæ.

27. Dalbergia sympathetica? (South Canara.)
28. Derris new sp. (South Canara.)
29. Milletia splendens, W. A. (Nilgiris.)

Rubiaceæ.

30. New genus? allied to Galium (Carcoor ghat, Wynaad.)
31. Lasianthus acuminatus Wight.
32. „ Blumeanus Wight.

Umbelliferæ.

33. Pimpinella monoica Dalz.
34. Decaneurum microcephalum Dalz.
35. Doronicum new sp.

Apocynaceæ.

36. Carissa lanceolata. Dalz.

Gentianaceæ.

37 Ophelia multiflora Dalz.

Loganiaceæ.

38. Gærtnera divaricata. Thw.
39. Mitrasacme sp. (Malabar.)

Sapotaceæ.

40 Isonandra grandis (Thw.)

Labiateæ.

41. Nepeta new sp. (Bombay Presy.)

Ebenaceæ.

42. Diospyros paniculata. Dalz.
43. Diospyros new sp. male only (South Canara.)

Acanthaceæ.

44. Strobilanthes nigroscens. Andn.
45. „ auriculatus. Nees.
46. „ integrifolius. Dalz.
47. „ anceps Nees.
48. „ Neilgherrensis new sp. Bedd.
49. „ ixiocephalus (Benth.) (S. Can.)
50. Barleria Courtallica (Wight) (Bombay Pres.)
51. „ involucrata (Nees) (South Canara.)
52. Nelsonia sp. Do.
53. Calophanes sp. (Bombay Pres.)
54. Haplanthus verticellaris (Nees.)
55. Cryptophragmium glabrum (Dalz.)
56. Lepidagathis cuspidatus Nees (S. Canara.)
57. „ new sp. Do.

Lauraceæ.

58. Actinodaphne new sp. (S. Cara., called Nette.)
59. Haasia Wightii. (Nees.)

Euphorbiaceæ.

60. Rottlera rhombifolia Thw.
61. New genus? near Putranjiva (Anamallays.)

Nepenthaceæ.

62. Nopenthes distillatoria, L.

APPENDIX B.

Description of 2 Cuddapah Ebonies and Gumsur Sal.

Diospyros ebenum.—(Retz.) A large tree, diœcious, leaves glabrous shining, short petioled, alternate, oblong obtuse or shortly and bluntly acuminated; male flowers in twos or threes on short pilose peduncles which have small bracts at the apex, calyx, funnel-shaped slightly 4-cleft at the apex, stamens 8-10 generally 2-cleft, but sometimes 3 or 4 cleft each division bearing an anther, rudiment of ovary none; hermaphrodite flowers solitary, calyx 2-bracteated, much larger than in the male, deeply 4-cleft with a callous, elevated, 4-lobed marginal ring round its mouth, stamens 8 with doubled anthers, style 1. Stigma 4-cleft, ovary 8-celled, fruit about the size of a cherry, generally 5-seeded, sitting in the cup like hardened reflexed calyx.

Called Nalooti (Teligoo) in the Cuddapah District; yields an intensely black ebony.

Pl. i.

Diospyros Exsculpta.—(Ham.) A good-sized tree, diœcious, all the young parts downy leaves opposite and alternate oval entire; male peduncles 3-flowered, calyx, and coral gibbous 4-6 parted, divisions of coral contorted very downy, stamens 10-15 seated on a hairy receptacle, rudiment of ovary none. Female flowers solitary calyx and coral 4-6 parted, stamens none, ovary round hairy, 4-5 celled, styles 2 each, 2-cleft fruit size of a pigeon-egg, edible. Diospyros tomentosa. *Roxb. Fl. Indica* 11. 532. (*not Poir.*) called Tunki (Teligoo) in the Cuddapah District; yields an intensely black ebony.

Pl. ii.

A third species of Diospyros abundant in South Canara, yields a valuable species of ebony. It is I believe the "Diospyros melanoxylon," but I have not succeeded in obtaining the flowers.

Shorea robusta.—(Roxb.) Leaves short petioled cordate-oblong stipules falcate, for panicles terminal and axillary, stamens numerous, stigma 3-toothed.

Pl. iii.

Abundant in the Gumsur and Russelcondah forests and called Sàlwa in Oorea, but generally known by the name of Sál. It is also found in great abundance in forests to the north of the Godavery, where it is called Googal. It yields a most valuable hard timber which seems quite proof against white ants.

To the south of the Peninsula we have two other species of this genus, viz., *Shorea laccifera* (Vatica laccifera, Wight's Icones, pl. 164) abundant in the Cuddapah forests (Jállàri Teligoo) and also found in the forests on the western side of the Peninsula, and *Shorea Tumbugaia* (Vatica Tumbugaia, Wight's Icones, pl. 27) which seems to be confined to the Cuddapah forests (called in Teligoo Thambà), both these species yield most valuable timber.

The following trees of this valuable order are also found in our Presidency.

Hopea parviflora.—(Bedd. figured in Conservator's Annual Report for 1863-64) abundant in the forests of Nellumboor where it is called Irul bogam, and in the forests of South Canara where it is known by the Canarese names of Tirpu and Kiral Boghi, yields a timber (though as yet little known) second to none in our Presidency.

Hopea Wightiana.—(Wall. figured in Wight's Illustrations) abundant in South Canara, and in most of our western forests, called Kal Báo and Hiral Boghi in South Canara, yields a valuable timber.

Dipterocarpus Indicus.—(Bedd. figured in Conservator's Report for 1864-65) abundant the ghat forests of South Canara where it is called Gajjá, yields a valuable timber.

Vateria Malabarica.—(Blume, figured in Wight's Illustrations at V. Indica, but really distinct from the Ceylonese tree, which bears that name), common in all our western forests.

called Dhoop in South Canara where it is used in ship-building, and small boats are made out of it, and Vellay Kungiliam in the Anamallays where the dammer is often collected.

Vatica Roxburghiana.—(Hook. and Benth. figured in Wight's Icones, pl. 26, as Vateria Roxburghiana) found in South Canara and other parts of the western side of the presidency, called Googal Dhoop in South Canara, quality of timber unknown I may add that the names Dhoop, Kungiliam, Sal, Googal Dammer, are applied indiscriminately in different districts to all trees of this order yielding dammer

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APPENDIX F

No. 7.

ASSISTANT CONSERVATOR'S OFFICE,
CAMP CUDDAPAH, 20*th May* 1866.

From

MR. H H. YARDE,

Assistant Conservator of Forests.

To

CAPTAIN R. H. BEDDOME,

Officiating Conservator of Forests.

SIR,—I have the honor to subjoin a report of the operations of the Cuddapah and North Arcot forests for the official year 1865-66.

In the year I have visited the greater portion of the forests in the Cuddapah, and the whole of the forests in the North Arcot Districts. The Dhoor forests in the Cuddapah District, I assumed charge of on the 1st May 1865, and visited the same to acquaint myself more fully of the extent of forest land, as also to ascertain the principal outlets and to establish tannahs. The forests of the Kurnool District, which join that of Dhoor have been, from the constitution and management of our tannahs, preserved from smuggling; at least I have not known any instances to occur through our limits by these tannahs.

The forests extending over the Taluqs of Sidhout, Budvail and Pullempett, are all in high working order by the Voucher and License system.

A portion of the forest south-west of the station is worked by the department to supply the Codoor Depôt with timber.

Plantation of Red Saunders.—Nearly all of the seeds (20,000) were sown at the latter end of July 1865 germinated, and I particularly noticed the slow growth of the seeds flatly laid a little below the surface of the beds. The seeds perpendicularly and inclininglly thrust half deep into the ground, germinated at the 15th or 19th day; whilst the former method generally took one-fourth or more of the time of the latter. I lost a few plants only after germinating, but a casualty happened, destroying many promising beds.

The plantation lies to the east of the Codoor Traveller's Bungalow, the site being selected chiefly because of the proximity of a river, by which the nursery is watered. The heavy rains in November last caused the stream to be so swollen, that 24 of my most promising beds were washed away, and but for a more rise of earth nearly 2 feet, where numerous other suckers were in good growth, I should perhaps have lost all.

During the rains I transplanted 4,000 plants or two beds, into a piece of ground that already had been cleared and prepared to receive them In July next I shall endeavour to get through transplanting, and with permission will commence more planting at the proper seasons.

From July up to date the average height the plants at the nursery have attained is 10 inches, the general health good.

I intend transferring for trial a few plants to the Hills in wicker baskets, but I entertain little hopes of their thriving with the fires so prevalent in the Hills.

Baulpully Plantation.—The saplings of last year are few in number, as most died in the year; those that survived the severe changes of the weather are stunted in growth and anything but satisfactory.

Fires.—These have been of very unusual occurrence this year, and have spread throughout every part of the District. They may be caused by the spontaneous ignition from friction of bamboos, but they are more likely the result of the wilful burning of grass by ryots to provide better growth of forage for their cattle. Whatever the cause, I am sure I cannot protect the forests from such conflagrations. It is a pity certainly that we cannot apprehend the offender, because young trees especially, have become so scorched and burnt, that it leaves but little chance of their ever again coming forward in growth.

Depôts.—The pressure on our Depôt for timber by the Railway during the year, has not been great, the D. P. W. and the Ordnance have been supplied with a few logs of Buttakadama (Nauclea parviflora), particulars of which may be seen in the Account Current of the year.

Sale of confiscated Timber.—The amount of Rupees 181-8-6 has been realized under this head for the year, and the cause of so large an item is in consequence of the seizures made in the Dhoor forests after I took charge.

Health of Establishment.—The peons have all suffered severely from fever, one died during the year. I had been seized more than once myself, but am happily well again.

Revenue.—This shews the particulars of collection in the year with that of 1863-64-65.

Description.	1863-64.			1864-65.			1865-66.		
Timber	19,428	2	9	23,453	14	6	23,236	11	1
Firewood	1,017	9	6	472	12	0	2,867	4	0
Palmyrahs	4	0	0	...	...	...	96	0	0
Charcoal	163	13	9	203	14	0	156	11	0
Bamboos	206	2	0	77	11	0	48	0	0
Sale of confiscated timber	149	8	0	109	12	0	181	8	6
Sale of depôt timber	682	6	0	4,845	14	8	907	4	8
Total.	21,651	10	0	29,163	14	2	27,493	7	3

Extra Establishment.—Owing to the extent of forest land and the pressure of supervision, the want of an Overseer (of the 2nd class) for the Cuddapah District is much wanted, particularly now that the Kirkumbaddy jungles are rising into importance from the circumstance of the Polygar lands being almost denuded of forest. I am very frequently called away into different portions of the forest, and when this happens, less care is evinced by the peons in regard to smuggling, and my plantations are obliged to be supervised by persons who care little about them, whereas if I could obtain the service of an Overseer, this could have his care when I am out in the district, and mine when he is inspecting the jungles; besides I am sanguine that this step will enhance the Revenue, because now I can very insufficiently give my attention to all the tannahs in the district.

The siding at Baulpully is, I believe, completed, and will be expected to work shortly; for this purpose I have to solicit sanction for two more peons to protect the forests near the siding, and check licenses. I am unable to arrange sending any two of my present establishment for these purposes, and the peons at Kirkcumbaddy or Codoor cannot attend to the duties because the Platform is 16 and 14 miles respectively from their stations.

North Arcot District Forest.—In a general view these forests are under steady conservancy; but owing to portions of the forest in the Vellore and Chondragherry Taluqs being conserved by

the Collector's Department, it is very difficult to detect what timber is stolen from our jungles when protected by a Monigar's license.

Principal resources of Forests.—Bamboos were found in almost any quantity over the jungles, but since the seignorage ceased to exist, the jungles have been denuded of this very useful material A register was kept for a week after the removal of tax of the number of Bandies taken out of the forests of Thellay and Arasampett; in the Vellore Taluq the average was about 40 carts every third day, which at the rate of 12 annas per bandy load gave the weekly value of Rupees 90.

Depôt.—Timber to the amount of Rs. 45-13-4 has been sold in the year to private individuals for house-building. There have been no demands from the D. P. W.

Working of the Forest.—A portion of the forest west of Vellore is worked for the storing of the Depôt, but in consequence of no proper workmen, great trouble in working out each month's allotment is occasioned. The axe-men are the ryots, and when their fields require their attention, which is frequent, they suspend felling.

Sale of confiscated timber.—The seizures in the year were few. An auction was held of all the timber confiscated, but as there was not sufficient time for the amount to be entered in the accounts, only Rs 20-8-5 has been credited to this head.

Financial Results of Cuddappah.

The financial results of Conservancy are as follows·

Amount recovered on account of Seignorage.....	26,275	14	1
Do. do by sale of timber at Depôt.....	907	4	8
Do do by timber supplied to Public Departments.....	128	12	0
Do do by sale of confiscated timber	181	8	6
Total Rupees			27,493 7 3
Deduct.			
Fixed Establishment.....	4,091	8	0
Working charges.....	3,131	13	0
			7,223 5 0
Net profit			20,270 2 3
Add value of timber in Depôt 3,321-4¼" cubic feet at Rupees 1-4-0 per cubic foot	4,151	11	11
do. „ 1,585-6' at 1 Rup. per foot ..	1,585	8	0
Value of Timber supplied do D P. W but not accounted for in 1856.....	1,304	12	0
			7,041 15 11
Balance in favour of Forest			27,312 2 2

NORTH ARCOT.

Amount recovered on account of Seignorage. ...	5,456	14	0			
do. by sale of Depôt timber.....	45	13	4			
do. do to Public Departments.....	0	0	0			
do. do confiscated timber.....	117	5	2			
Total Rupees...				5,620	0	6
Deduct.						
Fixed Establishment.....	2,004	0	0			
Working charges.....	388	3	4			
				2,392	3	4
Net Profit...				3,227	13	2
Add value of timber in Depôt 278'-1" cubit feet at 1-8 per foot	417	2	0			
Add value of timber in Depôt 229' 8" cubic feet at 1-4 per foot.....	287	1	4	704	3	4
Balance in favour of forest.....				3,932	0	6
Total in favour of Government by Revenue of Cuddapah and North Arcot.....				31,244	2	8

I have the honor, &c.

(Signed) H. H. YARDE,
Assistant Conservator of Forests.

APPENDIX G.

CAMP KURNOOL, *7th May*, 1866.

From

MR. T. SHEFFIELD,
Assistant Conservator of Forests.

To

CAPTAIN R. H. BEDDOME,
Conservator of Forests.

SIR,—I have the honor to submit the report of the forest operations in the Kurnool District for the year 1865-66.

Revenue.—This year the revenue is considerably less than that of last year; this is owing chiefly to the Madras Irrigation and Canal Company stopping work, but also from private people selling largely from their Puttah lands, and from the market being over-stocked.

Charcoal.—Government in their Order No. 1767 of 31st July 1865, ordered a tax of one anna per cavadie load to be levied on all charcoal burnt in the forests. In carrying out this order I met with great opposition; no one would pay, and the village heads would not render assistance. In this dilemma, I begged a percentage might be given to the Reddies on all money collected, which Government granted on your recommendation; this put matters somewhat right, and there was an immediate increase of Revenue from this source, viz., from 1st August 1865 to the end of November only Rupees 37-10 were collected, but from December 1865 up to the end of April 1866 Rs. 414-0-6 have been realized. Next year this amount will be doubled.

There is still room for improvement in the mode of collecting this tax; the iron workers complain bitterly of having to get a ticket for every load as it is wanted, saying it very much hinders their work and causes annoyance in having to take each load to the Reddy to check the ticket, and I have no doubt it does, for I have received petitions from a great many people praying to be allowed to pay so much per month for each forge instead of by the cavadie load. I think each forge might be allowed to pay so much per month or year, it is what the people themselves

wish, and would therefore be considered a favour granted. I advocated this some time since, but Government declined to alter the present system; but now that it has been tried and found wanting, and as it is objectionable to the people concerned, I beg that the other may be tried, particularly as it is their own wish. At present I take about Rs. 3 from each forge, but I have no doubt a great deal is brought in without payment, for I cannot spare enough peons to keep an efficient watch over all the villages; if the above system is introduced, no peons would be required except one to look after the manufacture in the forest.

Teak.—It is now upwards of 3 years since the felling of teak was stopped, and it may be as well I should report what progress towards recovery the forests are making. When these forests were first visited by Captain Beddome, teak of all sizes, from the mature tree to the sapling of 2 or 3 inches diameter were being felled, the forest was exhausted and required rest. The felling of teak was accordingly prohibited, and I am glad to say that now, in places where teak formerly grew, fine straight shoots of 10 to 15 feet in height have been made from the old stoles, and the only drawback I see is the deficiency of seedling trees. In very many places all the Teak trees have been felled, in such places the only crop we can expect is from the shoots of old stoles, and these, although valuable, will never make such fine timber as seedlings—it becomes therefore a question whether it would not be worth while to plant.

Planting.—That Teak is capable of growing to fine timber on these hills is proved from old stumps of over 3 feet diameter being found; there is a considerable number of such trees growing even now in places difficult to get at, which settles the question as to the capability of the land for producing good timber. That it is worth while to plant cannot be disputed when it is remembered what an extent of country looks to these forests for their supply, and the price that Teak sells at in the local markets; it therefore only remains to select likely sites for the plantations. There is one spot pointed out by the late Acting Collector Mr. Thomas, which is in every way suited for a plantation. It is situated between Gool Bromashwar peak and Manty Conda, the soil is clay with a good top dressing of decayed leaf-mould. There are two streams of water running through it and water carriage for the timber is near. There is another site below the Yerra-Chelma Bungalow equally good, but water is not so plentiful, and I have no doubt there are other places to be found, but in the two mentioned there are several thousand acres available. There is one serious difficulty to contend against in forming plantations on these hills; that is, the difficulty of getting labour. The hills are uninhabited, and the people do not like remaining on the hills for any length of time together, as all supplies have to be brought from the plains; to overcome this difficulty, I would suggest building some huts for the work-people, and also supply them with grain at the market rates, as is done in Mudumally. If this is done, I think there will not be the least trouble in procuring coolies, who will remain.

Conservancy.—To ensure the full benefits of conservancy, we ought to work the forests by Government agency. The forests are very extensive, but the quantity of timber and wood taken from them yearly is very great, and as it is not the mature trees which are felled but trees of 3 feet circumference (for people will never take large trees while ones that suit their purpose better are at hand, unless indeed they fell a large tree and take the smallest part of the trunk, leaving the other and more valuable part to rot in the forest), there seems every likelihood of the forests not being able to meet the demands made upon it in a longer or shorter time. If measures are not taken to husband the present available supply, I beg therefore to recommend the following working plan as being, in my opinion, the best to meet the object in view. That we take the felling of all the reserved kinds of timber into our own hands, but continue to issue licenses for "junglewood,"—the object of this is two-fold, by issuing licenses for "junglewood" we shall collect a fair revenue (from 15 to 16,000 Rs.) yearly from this, and we shall at the same time preserve all the really valuable timbers, our own sales will perhaps about equal the above, so that we should be receiving about the same revenue as now, while the forests would benefit immensely by the plan. By working the forests ourselves, we should be more in them than at present, and should be better able to restrict

even the cutting of junglewood to places where it was plentiful or where it was necessary to thin it out to give room for the growth of the more valuable kinds.

Roads.—To bring out the large timber which we shall cut, it will be necessary to improve the forest cart-roads below Ghât, to make slips or roads up the outer face of the hills, and in many places to improve the dragging tracts on the hills. Very little outlay will serve to put them in order, except indeed the outer slopes overlooking the plains. Here it will be necessary either to form slips or make roads at some expense, in most cases the slips will be better and cheaper than roads, and I would have them formed thus, _ _ / with the solid boles of trees. This would not cost a great deal, as timber can be had on the spot. The logs shot down these slips would not be splintered and damaged, as they are, by being thrown down the present ragged rocky slips. If it is decided to commence working, the best time to begin these slips and roads will be after the rains, there is then water close at hand for man and cattle, grass in plenty, the weather is cool and my office-work is slack at that time.

Cattle.—To bring out the large beams from the forest, we ought to have a couple of elephants, and buffaloes for the small logs. From the bottom of the slip we must have bullocks and carts for carting to Depôt, and for the large logs, carts to enable us to sling the log under the axle. In many parts of the hills we shall be able to use bandies, and where we can do so it will be cheaper than dragging.

Depôts.—To accommodate the people as much as possible, we ought to have several Depôts. I am not at present prepared to say where they should be on the eastern side, except one must be at Cumbum, but on this side we ought to have one at Blachapilly, one at Nundial and one at Venketaporum, that is south, centre and north. The logs can be brought into these places, measured and numbered, and a peon who can write placed in charge of each. A list with the numbers of the logs, their cubic contents and the selling price of each log given to the peon. On any person selecting a log, the peon can inform him of the value and give him a list of the number and the amount to be paid, which he must pay into the Taluq Treasury, upon which the Tahsildar will give an order to remove the beam or beams within a given time.

A monthly account will be rendered to me by the Tahsildar of the amount taken and by the Depôt peon of the number of logs taken. There cannot be a chance of peculation by this method.

Floating.—As there is very little call for large beams in this district, and as it would be a pity to cut up such fine beams as are procurable here, I would recommend their being sent to distant markets—Cuddapah, Nellore, and Masulipatam; to each of these places I think we could avail ourselves of water carriage. From Nundial, down the Khond river into the Penn-air river I know is practicable, for I tried it last floods; this will enable us to get within seven miles of Cuddapah, and I believe we pass within a mile or two of the line of Railway on our way down If this is the case, large quantities of Yepa (" Hardwickia binata") could be supplied to them for sleepers at a moderate cost.

As yet I have not tried the Kistnah river, but I will do so at once. I think we shall be able to float on this river at all seasons, the only difficulty I expect to meet is in getting over the anicut. I think we shall have to drag the timber round it. To supply Nellore, we can use the Suggle-air river which rises in our forests in the Cumbum Taluq. I will try this river with the first freshes.

Sandalwood.—I am sorry to report that the Sandalwood found last year to the north of the Hills does not appear, at present, to be of much value. There is a great quantity of it, and the aroma is fair, but the tree does not appear to make heartwood; at least so little, that it is valueless. I cut some trees of one foot circumference which produced only quarter inch of wood giving smell; this is very discouraging, but perhaps as the trees get older, they will make more heartwood. Not one ripe tree can be found in the whole of the forest, which leads me to the conclusion that it is of some value when ripe, or people would not fell them.

This year to the south of the district in the Cumbum Taluq, I have discovered Sandal-wood ; it is young and has no smell at present. I think it likely that more will yet turn up as the forests are explored, but whether it will ever prove of value, I cannot say.

Depôt.—We have had a fair sale of wood from our Depôt, and it has proved a boon to the Ryot, who has no time to go to the forest to cut for himself. No timber has been supplied to the Public Departments. I had an order to supply the Engineer of Kurnool with 600 cubic feet, but I could not get out the required scantling, viz., 20 +12″ + 10″ with the miserable cattle belonging to the Wuddurs.

Yelle-condahs.—Last July I explored the Yellecondah range of hills dividing Cumbum from Nellore, by order of the Officiating Conservator of Forests, and submitted a report on the same. If this range was put under conservancy, it would assist us greatly in putting a stop to smuggling, now so rife, on that side ; for at present if a person's wood is detained, they at once say they brought it from the Yellecondah, and if there is no proof to the contrary, we must release the wood.

Smuggling.—There is a decrease of Rupees 1,500 this year under this head. Still the amount is large ; the fact is, that prior to the establishment of the Forest Department in the district, a regular trade was carried on by these people, and it is very difficult to eradicate a thing so deeply-rooted as this appears to be : besides, it is so profitable that they can afford a loss now and then.

Yerra Mallais.—The Acting Collector, H. E. Sullivan, Esq., is of opinion we ought to take charge of the whole of the forests of the district, which is also my opinion. The Yerra Mallais, although they contain no fine timber, yet they are very valuable and should be carefully conserved. The large town of Kurnool is wholly supplied with firewood from these hills, and unless the forest is looked after, the supply will shortly fail. About three or four peons could guard these forests well, and they might be expected to give a fair return.

Village Assistance.—I have every reason to be satisfied with the assistance rendered by the village authorities, with the exception of the Curnum of Venketaporam. This man and the Forest peon have been convicted of allowing timber to pass without checking the Licenses, of retaining people's licenses and selling them, and other crimes which have been reported to you ; they have each been fined Rupees 50, and dismissed.

Financial Results.

The financial results of Conservancy are as follows :—

Amount received on account of Seignorage.....	29,710	2	2
Sale of Depôt timber.....	1,793	1	6
Sale of confiscated, drift and waif timber	2,168	1	3
Total Rupees.....	33,671	4	11
Deduct.			
Fixed Establishment.....	5,810	6	1
Working and Contingent charges.....	3,841	13	0
Total expenditure...	9,652	3	1
Net profit...	24,019	1	10
Add value of timber in Depôt.....	1,471	4	0
Balance in favour of Forests.....	25,490	5	10

(Signed) T. SHEFFIELD,
Assistant Conservator of Forests.

APPENDIX II.

MADURA, *25th May* 1866

From

MR. T. N. TURNBULL,

Sub-Assistant Conservator of Madura Forests

To

CAPTAIN R. H. BEDDOME,

Officiating Conservator of Forests.

SIR,—I have the honor to submit my Annual Report of the Madura Forest range for the official year 1865-66, together with the usual accompaniments.

2. In conformity with the instructions contained in Circular No. 10, dated 17th April 1866, I have the honor to state that I have solely been in charge of the Madura Forest range throughout the year.

3. At the onset it will be necessary to mention that the License system is still maintained throughout the greater portion of this range. The south-east corner of the Cumbum Valley only being reserved for systematic working by the Department.

4. Our measures for extending, improving, and protecting the forests have been restricted to the cutting of creepers, and the clearing of brushwood around teak saplings in the Cumbum Valley, which tract promises in after years a fine Teak Forest.

5. The carrying out of the License system in respect of the marking of all reserved timber trees before they are permitted to be felled, has been strictly enforced, and I am happy to say works well.

6. Nothing, I regret, has yet been done towards demarcating the boundaries of the Zemindaries adjoining our forests. In my last year's summary I dwelt on irregularities arising therefrom, and it would be superfluous to say more in this report.

7. There having been no large demand for our depôt timber, I was compelled in consequence, to restrict our felling operations, and though I did so, there was an addition to our stock in Depôt of 659 cubic feet.

8. A comparison of the seignorage collected during the present year, with that of the past, shews a considerable increase in the former; it is a matter of difficulty to determine whether this is in general a consequence of an increase in the demand for timber or of vigilance in supervision to suppress smuggling, or of the facilities afforded to merchants in obtaining licenses. To whichever of these causes the increase may be ascribed, it is pleasing at the close of this official year, to be able to show an increase in our seignorage collections, though our sales in depôt have not been so extensive, notwithstanding the reduction in our rates.

9. Merchants desirous of taking out Licenses are now able to deposit their respective amounts in the Tasildars' Treasuries of Pulney, Dindigul, Madura and Pariakolam, and the Sub-Magistrate's Cutcherry at Chinnamanoor. I am inclined to think that to the facilities thus afforded must in a greater measure be attributed the increase of seignorage from Rs. 2,149-15-5 in 1864-65, to Rs. 4,323-9-10 in 1865-66. The above sum has been realized during the year upon 483 licenses issued for the following kinds of timber, bamboos and fuel.

Memo. shewing the quantity and amount realized from Timber, Bamboo, Firewood and Charcoal, under licenses issued during the official year 1865-66.

	No. of Bandy loads.	Seignorage thereon.			Total in 1864-65.			Increase.		
Vengay	463	2,709	0	0						
Teak	60	480	0	0						
Rosewood	21	164	0	0						
Vaghe	48	186	0	0						
Veckally	10	51	0	0						
Mully Vamboo	9	36	0	0						
Nochi	1	4	0	0						
Parumbay	1	4	0	0						
Kungiliam	2	8	0	0						
Maroothy	11	33	0	0						
Vilva	13	52	0	0						
Zampila	2	12	0	0						
Junglewood	231	231	0	0						
Firewood	546	170	10	0						
Bamboos (number)	30,525	174	14	0						
Charcoal (baskets)	82	5	2	0						
Junglewood (head loads)	22	2	12	0						
Firewood (do.)	15	...	3	10						
	...	4,323	9	10	2,150	10	8	2,172	15	2

10. From the above it will be observed that the demand for Vengay has been the greatest. For building and other purposes it is, in fact, preferred to all other woods by the Natives of these parts, whereas in the Cuddapah and Kurnool Districts there is a strong prejudice against its use.

11. Sales of confiscated timber during the official year under review have been frequent, realizing a total of Rupees 231-9-8, exclusive of the amounts paid to informers. The rewards have, in most instances, been given to the Duffadars and Peons of the department; in two sole instances to outsiders.

12. From the large quantity of timber this year confiscated, it may be assumed that clandestine felling had, in the immediately preceding years, been unduly extensive, and that the large number of confiscations this year, for its suppression, must be attributed to the strict enforcement of the Rules of the Department, for it is scarcely possible to believe that the fact of there not being a single confiscation in former years, is to be understood as indicating that the practice of clandestinely felling and removing timber had not come into existence.

13. Rupees 1,788-1-9 have been realized by the sale by tender this year of timber from our Depôts. There is a balance of 1016½ cubic feet in stock.

14. No demands were received from any Public Department in the district for timber during the official year.

15. Rupees 2-15-10 was the outstanding advance at the close of the last official year. Advances out of the Budget allotment to the extent of Rupees 3,122-4-9 were made to cart-contractors, axe-men, &c., out of which sum Rs. 2,323-8-8 have been satisfactorily worked out, leaving a balance of Rs. 801-11-11 to be carried to account under the head of "outstanding advances" to the next official year. It is only necessary in explanation of this large outstanding to report that timber to very nearly that value has been felled, but which from not having been delivered in Depôt up to the close of the official year has not been added to stock, and the outstanding balance reduced in proportion.

16. In regard to Forest products and the best means of utilizing them, I am of opinion that to lease or farm them out annually or once in three or five years, would be the best plan. Gums and resin are not collected in this district to a sufficient extent to become an article of commerce; nuts, fruits, honey, and wax are most sought after, the value can only be inferred by a competitive auction, making allowances for the gradual rise in the returns from such sales as the system of farming becomes better understood and the interests of the purchasers better protected.

17. The results of criminal prosecutions have been favourable. All cases charged by me were under Section 447 of the Indian Penal Code. In every case the parties were convicted, and the aggregate of fines amounts to Rs. 146, which has been credited to Forest Revenue " in compensation for depredations, &c. committed in Government forests."

18 The health of the establishment has, on the whole, not been good. The prevalence of fever prostrated many of the Subordinates. My writer suffered much from a fever contracted in the Cumbum Valley.

19 During one of my tours of the Kumbum forests, my attention was drawn to a tree called by the natives " Woodapay," affording a hard close-grained timber, specimen of which I send to you, as I am of opinion that it will prove a valuable substitute for Boxwood in engraving.

20. The Rules of the Department operate well, and are generally also understood by all engaged in the timber trade, yet notwithstanding the rigidness of our rules, several cases of clandestine felling have been detected, and the timber thus cut, confiscated. In a few instances I had the parties prosecuted and fined as above mentioned.

21. On some occasions I have had to relax the enforcement of our rules, viz., in regard to the time allowed for felling and removing the timber, which I have had to extend beyond the time originally granted, whenever I witnessed the obstacles merchants encounter, not only from the difficulty in procuring axe-men, but also from the prevailing fevers in these forests, and not unfrequently from their very fraudulent conduct in receiving advances from one merchant and working for another for ready payment.

22 In December last I was summoned to produce or cause to be produced before the Small Cause Court Judge of Madura, a license dated 6th February 1865, granted by my predecessor as evidence in a suit filed by a merchant against his axe-men for having received advances and violated their contract. I adduce this simply to show that such cases are not unfrequent.

23. The revenue derived in this district on Bamboos is trifling, when compared with that of others; yet it is to be observed that the revenue under this head was decidedly improving, as will be seen from the memo. in the margin, and had the tax continued in force, I anticipated a much larger "out-turn." Agriculturalists, artizans and villagers have always been permitted to have bamboos *free* for their economical and domestic uses, and the tax on merchants was in no way oppressive or even complained of. By the abolition of this tax, which was intended to be merely protective, our Bamboo jungles have suffered much. Undoubtedly felling of this essential commodity is on the increase, and there being no seignorage encourages its wasteful use, in all probability if felling of Bamboos is permitted to be carried on unchecked, as at present, we shall see its total eradication and then the suffering of the poorer classes will be augmented, not only in consequence of its eradication, but from the fact that the water supply of the surrounding country will be injuriously affected thereby. The Collector, with reference to the Board's Proceedings No. 6783, dated 23rd October 1865, called on me for a report, and my views enunciated in the above paras. were contained in my letter No. 104, dated 16th November 1865, to the Collector, and has I believe been by him before the Board of Revenue, whose Proceedings sanctioned by Government, have made the re-imposition and the rate of taxation discretionary with Collectors

24. The grant of timber free to ryots for agricultural purposes has been large. During the year, with concurrence of the Collector, I have been able to introduce the " Free license system," *i.e.* on a ryot requiring timber either for domestic or agricultural purposes, he has to apply in the first place to one of the Revenue officers of the Taluq invested with the Collector's authority, who being sufficiently competent to judge of the legitimacy of the applicant's right, grants a free license in the printed form supplied by this office for only the unreserved timbers. These free licenses are then submitted to me for countersignature, in order to the felling and removing of the timber within a specified date. The locality in which the timber is permitted to be felled is fixed by me, consulting of course, as far as possible, the convenience of the applicant. The same checks are in force for the grant of timber on payment are maintained on that free of tax, and the issue of these free licenses greatly facilitate conservancy. Thus the difficulty of knowing who is a ryot and who is not one has been overcome, our forests preserved, and the ryots' accessibility to them diminish-

ed. The free license system, it will be observed, rigidly respects the privilege of immemorial standing, conceding the grant of timber free of tax to ryots, while at the same time it enforces Rule 20 of the Forest Department.

25. This system, I am happy to be able to record, is now well understood in the District, only one instance of its breach having been brought to my notice.

26. The total number of licenses granted under this system has been 143 for 490 bandy loads of the unreserved timbers.

27. In bringing this report to a close I feel it necessary to subjoin a memoradum showing the revenue derived from these forests since the organization of the Forest Department in this district, from which it will be observed that the revenue of the year under review is an increased one.

MEMORANDUM.

	Rs.	As.	P.
1860-61	2,568	5	1
1861-62	6,526	7	10
1862-63	4,949	12	5
1863-64	3,187	10	6
1864-65	6,382	11	2
1865-66	6,529	5	3

28. There is also a further sum of Rupees 340-3-11 due for timber sold, which amount not having been received, could not be carried to credit this year.

29. The financial results for the year are as under :—

Receipts.						
I. Sale of Timber and Sandalwood brought to Depôts by Government Agency.....	1,788	1	9			
II. Sale of timber, firewood, Bamboos and Charcoal removed from the forests by purchasers, including seignorage.....	4,323	9	10			
III. Sale of confiscated timber, deducting 50 per cent. of the sale proceeds paid to the informants of clandestine felling, Vide G. O. No. 921, dated 4th May 1865.....	231	9	8			
IV. Sale of fruits and other minor Forest produce.	40	0	0			
Miscellaneous receipts.....	146	0	0			
				6,529	5	3
Expenditure.						
I. Timber expenses for felling, clearing, sawing and transport of timber by land or water to Depôts.....	2,323	8	6			
Total of Conservancy and working...	2,323	8	6			
B. Establishment.						
Pay of Executive officers.....	1,040	0	0			
Do. office Establishment.....	1,825	0	0			
Travelling allowance.						
Executive officer.....	390	0	0			
Contingencies.....	20	0	0			
Total of Establishments..	3,275	0	0			
Total of Expenditure ..	2,323	8	6			
				5,598	8	6
Balance in favour of Government.....				930	12	9

(Signed) T. N. TURNBULL,

Sub-Assistant Conservator of Forests.

APPENDIX I.

No. 76.

OFFICE OF DEPY. CONSERVATOR OF FORESTS,
OOTACAMUND, 1*st June* 1866.

From

MAJOR H. R. MORGAN,
Deputy Conservator of Forests.

To

CAPTAIN R. H. BEDDOME,
Officiating Conservator of Forests.

SIR,—I have the honor to forward the Annual Report of the Forests under my charge for the official year 1865-66. The expenditure for the whole of the Forests amounts to Rupees 98,667-7-9, and the returns to Rupees 1,31,943-10-3, showing a profit of Rs. 33,276-2-6 on the transactions of the year, with wood in store valued at Rs. 2,60,575-10-0, as per Tables A. and B.

Name of the Officer in charge.

Mudumallai Forest.—The operations during the year have been conducted by 3rd class Overseer Iyasawmy Naidoo, under my orders, and notwithstanding repeated attacks of fever, the Overseer has acquitted himself well.

Conservancy and Settlement of Boundaries.

2. The main roads have been carefully repaired, and a trunk road to open up a new part of the forest where there is a large quantity of teak, has been completed for a distance of two miles. Boundary marks on the south eastern side have been laid down, but the other sides have not yet been demarcated.

Timber felled and stored

3. The quantity of timber felled and stored in Depôts is but small, viz., 42041 $\frac{7}{16}$ cubic feet, at a cost of Rupees 3,284-7-10, a very large amount having been felled in the previous year. 9725 square feet of timber have been sawn at Mudumallai by contractors, and 4292 at Ootacamund for planks at a cost of Rs. 718-14-3.

Work done by Elephants and other Cattle and Contractors

4. Elephants have dragged from the Forest to the road 84253 cubit feet = Rs. 5,265-13-0 (at one anna per cubit foot) at a cost of Rs. 3,750-6-9 for feed and keep, including the pay of the Superintendent of Elephants. There are at work 31 carts and 50 pairs of bullocks, which have carted from the Depôts at Karkanah, Musingoody, and Seegur to Ootacamund 12101$\frac{1}{2}$ cubit feet; and from the Forest Depôts, 12 miles to the Karkanah, 23005$\frac{1}{2}$ cubit feet which, by Contractor's rate, amounts to Rs. 9,546-4-8 against the feed and keep of Rs. 9,780-13-10. The Contractors have received Rupees 21,485-1-11 (including last year's balance of Rupees 3,312-1-3) as advance, and carted to Ootacamund 30,044$\frac{1}{4}$ cubic feet, and from Forest to Karkanah 5723$\frac{1}{2}$ cubic feet amounting to Rs. 15,167-0-3, which leaves a small balance of Rs. 6,318-1-8 to be accounted for during the present official year.

License issued for timber.

5. 324 Vengay trees have been felled and removed by wood cutters at 2 Rs. each, and the amount has been carried to Forest Revenue; the demand for junglewood has not been great.

Confiscated logs.

6. About 600 small pieces of teak were seized from men, who came under pretence of removing crooked timber and squared up a quantity of straight teak, which had been felled alongside of the road to admit light and air.

Timber sold to merchants and the balance remaining on hand.

7. Timber sold to merchants in the Forest is 7275$\frac{3}{4}$ cubic feet; in Ootacamund Depôt 2473$\frac{3}{4}$ cubic feet, and at Mussingoody 279 cubic feet, amounting in all to Rs. 9,533-0-5, which has been carried to Forest Revenue. The demand for teak by the Mysore merchants has been small.

The quantity of timber to be accounted for is given in Table B.

Timber supplied to D. P. W. and the value adjusted on the receipt of Vouchers.

8. The quantity of timber supplied from Ootacamund Depôt to the Lawrence Asylum Works, &c. on the Neilgherries, is 27723½ cubic feet and that supplied from the Karkanah to the Goodalur Road is 954 cubic feet, the total valuation of these amounts to Rs. 57,028-12-10, which have been adjusted on receipts furnished from time to time.

Outstanding advances.

9. The outstanding advances remaining to be adjusted, including the unpassed bills up to 30th April 1866, and rent of forest for the current year, amount to Rs. 17,688-12-10, and their particulars are given in Table C.

Plantations.

10. The trees planted in 1864 have made fair growth, some being 7 feet in height. Those planted in 1865 (4,000) have not made such progress, the past year having been very dry; 15,000 pits are now ready for planting and many thousand seedlings are in the nursery for transplanting.

Forest products.

11. Of Forest products there are several, such as turmeric, gum from the Sâl, bees-wax, and honey. These are collected by the Thane Coorumbers for the Chetties under the conditions of the Lease.

Trespasses, &c. committed.

12. There have been no criminal prosecutions.

Health of Forest establishment.

13. The health of the Forest establishment has been as usual, much fever, some dysentery, and ulcerated sores on the legs. The first is cured by Quinine, the second by 2 grain doses of Ipecacuhana, the third by Wroughton's ointment. Chlorodyne, in some cases of fever and diarrhœa, has proved an invaluable medicine; unfortunately the Medical Stores contain neither Quinine nor Chlorodyne, for though I indented in 1865 for 6 bottles of each, I received none.

Any new or rare plants.

14. The Sâl of these forests is pronounced by the Officiating Conservator to be Vatica Laccifera.

Summary of operations.

15. In summarizing the operations for the past year, I would observe that the financial results may be considered satisfactory, as we have had to purchase a large quantity of Plant, in the shape of bullocks and carts, and when it is borne in mind that this forest is a rented forest, and the whole of the supervision of five other forests is charged to this one forest, and that 24,000 Rs. worth of timber was ready in the Ootacamund Yard for the D. P. W., Rupees 67,570-11-6 is a fair return. Labor has risen enormously, and provisions are at famine prices; grain formerly 5 Rupees, is now 10 Rs., the 100 seers, and Raggy once 4 Rs., is now 7-8-0 the 100 seers, consequently the price of timber has risen. To add to our embarrassments there is no Contract Law, and Coorumbers, Coolies, Cartmen, &c. do as they like.

Financial Results.

16. The expenditure for the year amounts to Rs. 64,891-2-10, and the receipts to Rupees 67,570-11-6, showing a profit of Rupees 2,679-8-8, with an increase of wood in store to the value of Rs. 45,176-1-6.

Financial Results of Mudumallai Forests, for 1865-66.

Receipts.	RS.	A.	P.	RS.	A.	P.
I. Sale of Teak timber brought to Depôts by Government Agency.....	9,533	0	5			
Value of timber supplied to D. P. W.....	57,028	12	10			
II. Sale of Timber, Firewood, Bamboos, and Charcoal removed from the Forests by purchasers, including seignorage.....	725	12	0			
Miscellaneous receipts.....	283	2	3			
				67,570	11	6

Expenditure.	RS.	A.	P.	RS.	A.	P.
I. Timber expenses for felling, clearing, sawing and transport of timber by land or water to Depôts	19,234	3	8			
II. Purchase of elephants, cattle, &c.	8,646	11	6			
III. Feed and keep of elephants and cattle	13,624	7	2			
IV. Rent of leased forest and seignorage paid for timber felled in leased forests, also rent of Timber Depôt land at Ootacamund	3,600	0	0			
V. Communications, buildings and minor works	3,742	6	4			
Total of conservancy and working	48,847	12	8			
I. Salaries.						
2. Pay of Executive officers	4,400	0	0			
Military pay of do	7,049	15	6			
3 Pay of Office Establishment	1,368	0	0			
B. Executive.						
5. Timber Depôt and working Establishment.	1,983	0	0			
II. Travelling allowance.						
2. Executive officer	990	0	0			
3. Subordinate Establishment	120	0	0			
III. Contingencies	33	8	0			
4. Sundries	98	14	8			
Total of Establishment	16,043	6	2			
Do. of Expenditure	48,847	12	8			
				64,891	2	10
Balance in favour of Government				2,679	8	8
				67,570	11	6
Balance of timber in Depôt on 30th April 1865	1,70,284	6	0			
Add timber felled during 1866	1,11,737	14	9			
Total	2,82,022	4	9			
Deduct timber sold in 1865-66, including supply to D. P. W.	66,561	13	3			
Balance of timber on hand	215,460	7	6			
Deduct value of timber in Depôt, 30th April 1865	170,284	6	0			
Additional stock	45,176	1	6			
Financial result in favour of the forest	2,679	8	8			
Results for the year				47,855	10	2

(Signed) H. R. MORGAN, MAJOR,
Deputy Conservator of Forests.

APPENDIX K.

Seegur and Suttimungalum.

Name of the Officer in charge.

1. These forests have been worked for the past year by 3rd class Overseer Appavoo Moodelly, who has acquitted himself well of the duties entrusted to him.

Conservancy and Settlement of Boundaries.

2. None.

Timber felled and stored.

3. The quantity of Sandalwood felled and stored in Depôts is 12,961 maunds, valued at Rupees 40,986-8-10.

Work done by Elephants and other Cattle and Contractors.

4. None.

License issued for timber, &c.

5. A small amount of Vengay has been sold at Suttimungalum, the bamboo tax having been taken off, there is of course a deficit. The total amount realized under License is Rupees 1,229-9-0, which has been carried to the credit of Forest Revenue.

Confiscated Logs.

6. No timber has been confiscated clandestinely felled.

Timber sold to merchants and the balance remaining on hand.

7. The value of timber sold to merchants is Rs. 26,967-8-5, 72 Rupees worth of ragi have been sold and carried to Forest Revenue. The particulars of the quantity of timber on hand are given in Table B.

Timber supplied to D. P. W. and adjusted on receipt of Vouchers.

8. None.

Outstanding advances.

9. The outstanding advances are very small, namely, Rupees 202-2-7, and their particulars are enumerated in Table C.

Plantations.

10. A large nursery of Sandalwood trees is kept up, and experiments in planting are being carried out. An excellent plan is to imitate nature as closely as possible, by ploughing lines six feet apart, sowing seeds in the lines, and then raising a bamboo hedge two feet high and three feet wide over the seeds, the young plants obtain shelter from the sun and protection from wild animals.

Forests Products.

11. There are no Forest products in this forest.

Trespasses, &c. committed in the Nurseries, &c.

12. No trespasses or damages have been committed.

Health of Forest Establishment.

13. Some persons have died from Hassanoor fever, the jungles in that vicinity being deadly for the greater part of the year.

Any rare or new plants.

14 None.

Summary of operations.

15. The operations during the year have been, preparing Sandalwood and making experiments in planting, the same. The usual conservation of the Forests has been carefully carried out.

Financial Results.

16. The financial results may be considered satisfactory, the expenditure being Rupees 11,554-3-0, and returns Rupees 28,269-1-5, showing a profit of Rupees 16,714-14-5, with an increase of wood in store, valued at Rs. 14,019-0-5.

Financial Results of the Seegur and Sattimungalum Forests, for 1865-66

Receipts.	Rs.	A.	P.	Rs.	A	P.
I. Sale of timber and Sandalwood brought to Depôt by Government Agency.....	26,967	8	5			
II Sale of timber, firewood, bamboos, and charcoal removed from the forests by purchasers, including seignorage.....	1,229	9	0			
A. Conservancy and working.....	72	0	0			
				28,269	1	5

Expenditure	RS.	A.	P	RS.	A	P.
I. Timber expenses for felling, clearing and transport of timber by land or water to Depôt.....	7,711	5	6			
II. Purchase of elephants, cattle, tools and plants..	482	8	0			
III. Feed and keep of elephants and cattle.....	506	12	11			
IV. Plantation.....	620	9	7			
V. Communications, buildings and minor works ...	48	8	0			
Total of conservancy and working. .	9,369	12	0			
B. *Establishment.*						
3. Pay of office Establishment.....	156	0	0			
C. *Executive.*						
4. Forest Conservancy Establishment	1,310	5	4			
5. Timber Depôt and working Establishment.....	360	0	0			
Travelling allowance.						
3. Subordinate Establishment.....	251	15	8			
Contingency.						
4. Sundries.....	106	2	0			
Total of Establishment ...	2,184	7	0			
Do. of Expenditure.....	9,369	12	0			
				11,554	3	0
Balance in favour of Government...	.....			16,714	14	5
				28,269	1	5
Balance of timber in Depôt on 30th April 1865...	20,545	8	9			
Add timber felled during 1865-66.....	40,207	13	7			
Total.	60,753	6	4			
Deduct timber sold in 1865-66.....	26,967	8	5			
Balance of timber on hand.....	3,785	13	11			
Deduct balance of timber in Depôt 30th April 1865.	20,545	8	9			
Additional stock...	13,240	5	2			
Financial results in favour of the Seegur and Suttea-mungalum forests.....	16,714	14	5			
Results for the year...	.....			29,955	3	7

(Signed) H. R. MORGAN, MAJOR,

Deputy Conservator of Forests.

APPENDIX L.

1st *June*, 1866.

Neilgherry Sholas.

Name of the Officer in charge

1. These have been carefully conserved by Overseers Taylor and Newman

Conservancy and settlement of Boundaries

2. None

Timber felled and stored

3 There is a large amount of firewood in the Davie Sholah ready for stacking, but it cannot be used as the tenant refuses to stack it.

Work done by Elephants, Cattle, &c.

4. The carts and bullocks at Davie Shola have been doing nothing, as there was no wood for them to remove. The number of bandy loads carted to the Road by bullocks is 1,650, at a cost of Rupees 764-15-9, for feed and keep

Licenses issued for timber

5. The wood of all descriptions felled and removed by Burghers &c. during the year from Sholas is Rupees 3,035-7-6, which has been carried to Forest Revenue.

Confiscated logs.

6. A good deal of wood in the shape of head-loads has been confiscated, but it has no effect; the Sub-Magistrate's punishment, consisting of simple confinement for six or eight hours. The confiscated money, deducting one-half paid to the informers, amounts to Rs. 20-2-6, which has been remitted to the Collector's Treasury.

Timber sold to Merchants and the balance remaining on hand

7. None.

Timber supplied to D P W

8. 1,390 bandy loads of firewood, of which 1,184 to the Lawrence Asylum Works and 176 to cattle-shed at Coonoor, have been supplied to the Department Public Works, the value of which amounts to Rupees 845, which have been adjusted on receipts furnished from time to time.

Outstanding advances.

9 Rupees 54 are the advances to be adjusted on 30th April 1866.

Plantations

10 In the Eucalyptus plantation, 3,700 plants have been put out, 10,260 have been mossed, 47,000 Eucalyptus plants are in beds, 2,572 yards of trenching are finished. In the Governor's Sholah 15,480 Acacia plants have been put out and 8,198 plants mossed for planting out. The nurseries contain 26,200 Australian Acacias, and 1,700 Eucalypti

Forest Products

11. None.

Trespasses committed in the Nursery

12. None

Health of Forest Establishment

13 The health of the forest employés has been good.

Any rare or new plants.

14 None.

Summary of operations.

15. The operations have consisted in conserving the Government sholas, forming nurseries, extending plantations of timber trees and firewood and supplying the D. P W. with firewood.

Financial results.

16. The Financial results are not satisfactory, due partly to our not coming to terms with the Davi Sholah tenant, and partly to the immense amount of Shola land sold during the past year to the public.

Financial Results of Neilgherry Sholas, for 1865-66.

	Rs.	A.	P.	Rs.	A.	P.
Receipts.						
Value of timber supplied to D. P. W.....	845	0	0			
II. Sale of timber, firewood, bamboo and charcoal removed from the forests by purchasers including.....	3,055	10	0			
Seignorage.....	.....					
				3,900	10	0
Balance against.....	.....			2,064	13	2
Total...	.....			5,965	7	2
Expenditure.						
I. Timber expenses for felling, sawing, clearing and transport of timber by land or water to Depôt.....	381	10	6			
II. Purchase of elephants, cattle, tools and plants.....	1,076	12	6			
III. Feed and keep of elephants and cattle.....	764	15	9			
IV. Rent of Leased land and seignorage paid for timber felled in leased forests.....	10	0	0			
VI. Plantations.....	1,625	4	11			
X. Communications, buildings and minor works.....	258	0	0			
Total of conservancy and working....	4,116	11	8			
B. *Establishment.*						
3. Pay of office Establishment.....	96	0	0			
C. *Executive.*						
4. Forest Conservancy Establishment.....	1,272	0	0			
II. Travelling allowances.						
3. Subordinate Establishment.....	360	0	0			
III. Contingency.						
4. Sundries.....	120	11	6			
Total of Establishment....	1,848	11	6			
Do of Expenditure	4,116	11	8			
				5,965	7	2
Results for the year against the Shola...	.....			2,064	13	2

(Signed) H. R. MORGAN, Major,
Deputy Conservator of Forests.

APPENDIX M.

Wellington Australian Plantations

Name of the Officer in charge. 1. The works have been carefully carried on by Mr. Newman.

Conservancy and settlement of Boundaries 2. None.

Timber felled and stored 3. None.

Work done by Elephants and other Cattle and Contractors. 4. None.

Licenses issued for timber. 5. None

Confiscated wood 6. None.

Timber sold to Merchants and the balance remaining on hand. 7. Poles, &c. to the value of Rupees 544-8-0 have been sold to the Public.

Timber supplied to D. P. W. and adjusted on receipt of Vouchers. 8. 20 Poles have been supplied to the cattle shed at Coonoor for Rs. 20, which have been adjusted on receipts furnished.

Outstanding advances. 9. The outstanding advance remaining to be adjusted on 30th April 1866, is Rs. 100 against a brickmaker, which will be adjusted in course of this month.

Plantations

10. The number of trees planted out is as follows.—

Number of plants in Nursery, viz., in pots, Eucalypti plants...	3,000
Acacia Molissima.....	5,000
Number in beds not yet transplanted, Acacia Mollissima.....	2,000
Acacia Robusta.....	8,000
Total in pots...	8,000
Total...	10,000
Number of plants planted out, Eucalypti plants.....	400
Acacia Mollissima.....	1,800
A. robusta.....	9,000
Total plants.....	11,200

Forest products

11. None.

Trespasses committed in the Nursery.

12. None.

Health of Forest Establishment.

13. Health of the people employed in the Plantation has been good.

Any rare or new plants.

14. None.

Summary of operations.

15. The operations have been confined to planting out, increasing the Nursery, and supplying firewood to the Public from the old Plantation.

Financial results.

16. The expenditure amounts to Rs. 2,168-5-3, and the returns Rupees 564-8-0, leaving a balance of Rs. 1,603-13-3 against the Plantation.

Financial Results of the Wellington Australian Plantation, for 1865-66.

Receipts.	RS.	A.	P.	RS.	A.	P.
Value of timber supplied to D. P. W.....	20	0	0			
II. Sale of timber, firewood, bamboos, charcoal, removed from the forest by purchasers, including seignorage.....	544	8	0			
				564	8	0
A. Conservancy and Working.....				.....		
Balance against the Plantation.....				1,603	13	3
Total Rupees...				2,168	5	3
Expenditure.						
I. Timber expenses for felling, clearing, sawing and transport of timber by land or water to Depôts....	150	0	0			
VI. Plantation.....	1,533	13	3			
Total of conservancy and working...	1,683	13	3			
Establishment.						
5. Timber Depôt and working Establishments	480	0	0			
Contingency.						
4. Sundries.....	4	8	0			
Total of Establishment.....	484	8	0			
Do. of Expenditure.....	1,683	13	3			
				2,168	5	3
Results for the year against the Plantation...				1,603	13	3

(Signed) H. R. MORGAN, MAJOR,
Deputy Conservator of Forests.

APPENDIX N.

OOTACAMUND, 1st *June* 1866.

Bhowany.

Name of the Officer in charge.

1. The work has been carried on by Overseer Sharland during the past year, and he has been diligent in the performance of his duty.

Conservancy and settlement of Boundaries.

2. The usual conservation of the jungles has been carefully attended to.

Timber felled and stored.

3. The quantity of Sandalwood felled and stored in Depôt is 4,279 maunds, valued at Rupees 14,920-14-6.

Work done by Elephants, &c.

4. None.

Licenses issued for timber, &c.

5. The sales by License for Teak, Vengay, Acha and woods, are Rupees 606-12-8, which has been carried to the credit of Forest revenue.

Confiscated logs.

6. None.

Timbers sold to Merchants and the balance remaining on hand.

7. The amount of Sandalwood sold to the Contractor is Rupees 14,170-14-6, which have been carried to the credit of Forest Revenue, and the balance of wood in hand is 2,000 maunds of Sandalwood, valued at Rupees 6,000 as per Table B.

Timber supplied to D. P. W.

8. None.

Outanding advances,

9. Rupees 40 are the outstanding advances remaining to be adjusted on 30th April 1866.

Plantations.

10. No plantation has yet been made, but when the Burghoor road is completed, a suitable spot will be selected. Water in these jungles during the dry weather is very scarce.

Forest products.

11. None.

Trespasses committed in the Nursery.

12. None.

Health of Forest Establishment.

13. The Overseer has enjoyed good health, so has the Gomastah, but the Peons have been laid up with fever.

Any rare or new plants.

14. None.

Summary of operations.

15. The operations have been confined to preparing Sandalwood, issuing Licenses, and conserving the jungles.

Financial results.

16. The financial results are satisfactory, when it is considered that a large amount has been transferred to the Burghoor Ghât road, viz., Rs. 5,000. This road will no doubt be useful to the Forest Department, but as the Public will also use it, they ought to pay their portion, the expenditure is Rs. 7,905-11-8, the receipts are Rupees 14,777-11-2, and the profit is Rs. 6,871-15-6, with an increase of wood on hand valued at Rupees 750.

Financial Results of Bhowany, for 1865-66.

Receipts.	Rs.	A.	P	Rs.	A.	P.
I. Sale of timber and Sandalwood brought to Depôts by Government Agency	14,170	14	6			
II. Sale of timber, firewood, bamboos and charcoal removed from the forests by purchasers, including seignorage	606	12	8			
				14,777	11	2
Expenditure.						
I. Timber expenses for felling, clearing, sawing and transport of timber by land or water to Depôts	3,993	9	4			
II. Purchase of elephants, cattle, tools, plants, &c	120	0	0			
X. Communications, buildings and minor works	1,434	12	0			
Total of conservancy and working	5,548	5	4			
B. *Establishments.*						
5. Timber Depôt and working establishments	1,874	0	0			
Travelling Allowance.						
3. Subordinate Establishment	456	0	0			
4. Sundries	27	6	4			
Total of Establishment	2,357	6	4			
Do. of Expenditure	5,548	5	4			
				7,905	11	8
Balance in favour of Government	.....			6,871	15	6
				14,777	11	2
Balance of timber in Depôt on 30th April 1865	5,250	0	0			
Add timber felled during 1865	14,920	14	6			
Total	20,170	14	6			
Deduct timber sold in 1865-66	14,170	14	6			
Balance of timber on hand	6,000	0	0			
Deduct balance of timber in Depôt, 30th April 1865	5,250	0	0			
Additional Stock	750	0	0			
Financial results in favour of Bhowany forests	6,871	15	6			
Results for the year	.....			7,621	15	6

(Signed) H. R. MORGAN, Major,
Deputy Conservator of Forests.

APPENDIX O.

Collegal.

Name of the officer in charge.

1. The operations for the year have been carried on by Overseer Grant, who, though has suffered from very severe fever, has done well.

Conservancy and settlement of Boundaries.

2. The Sandalwood jungles have all been explored and are now known, the Acha, Vengay and other forests have been explored, and in time will no doubt be worked to advantage; at present the small demand for timber in Collegal prevents our working the Forests.

Timber felled and stored.

3. The quantity of timber felled is as follows :—

4,310 Maunds of Sandalwood.
80¾ cubic feet of Blackwood.
48½ do. Teakwood.
213 do. Junglewood, such as Vengay, &c.

Work done by Elephants, other cattle, &c.

4. The carts and bullocks have been very useful in bringing in Sandalwood from the distant parts of the forests, when hired transport was not available; indeed the work could not have been carried on without them.

License issued on timber.

5. No timber, firewood, &c., have been removed by wood cutters under "License system" except two Vengay trees in April 1866, at 3 Rupees each equal 6 Rupees, which has been carried to the credit of Forest Revenue. Rupees 759-0-7 have been realized from seignorage on firewood, bamboos, &c.

Confiscated logs.

6. A good deal of wood has been confiscated, but the Tahsildar invariably refuses to commit the cases brought to his notice. A European Assistant is much required in this fine taluq. The amount realized by confiscated wood is Rupees 34-6-0, one-half of which has been paid to the informers, and the other half has been carried to Forest Revenue.

Timber sold to Merchants, and remaining on hand.

7. Timber, especially Sandalwood, to the value of Rs. 16,036-2-10 has been sold, and carried to the credit of Forest Revenue, and the particulars of the balance of wood in hand are given in Table B.

Timber supplied to D P. W.

8. The wood supplied to D. P. W. amounts to Rupees 34-3-6, which has been adjusted on receipts furnished.

Outstanding advances.

9. The advances are very limited, and those that are outstanding, viz., Rs. 334-12-6, are given in Table C.

Plantations.

10. Nothing has yet been done in the planting line, but the Overseer in charge has been directed to select a suitable site for this years' operations.

Forest products.

11. None.

Trespasses committed in the Nursery.

12. There has been no result by criminal prosecutions.

13. The Overseer has been very ill from fever and every Peon has suffered.

Any rare or new plants

14. None.

Summary of operations.

15. The operations have been confined to Sandalwood felling, these works are now carried on near Bylcor at the western end of the Ballyrungum Hills.

Financial results

16. The results appear satisfactory, the expenditure being Rs. 6,182-9-10, and the returns Rs. 16,861-0-2, and the profit Rs. 10,678-6-4, with an increase of stock of wood in store of Rs. 3,034-1-4, including the balance of Rs. 1,205-8-10 due by the contractor on account of wood sold to, and removed by him up to 30th April 1866

Financial results of the Collegal Forests, 1865-66

Receipts.	Rs.	A.	P	Rs	A	P.
I Sale of timber and Sandalwood brought to Depôt by Government Agency	16,036	2	10			
Value of timber supplied to D P W	34	3	6			
II. Sale of timber, firewood, bamboos and charcoal removed by purchasers, including seignorage	765	0	7			
Sale of confiscated timber, deducting 50 per cent. of the sale proceeds paid to the informants of clandestine felling, vide G. O. No. 92, dated 4th May 1865	17	3	0			
				16,852	9	11
Expenditure.						
I. Timber expenses for felling, clearing, sawing and transport of timber by land or water to Depôt	2,796	5	1			
II. Purchase of elephants, cattle, tools and plants	288	8	0			
III. Feed and keep of elephants and cattle	657	11	3			
X. Communications, buildings and minor works	59	12	11			
Total of Conservancy and working	3,802	5	3			
B. *Establishments.*						
5. Timber Depôt and working Establishments	1,937	8	9			
Travelling Allowance.						
Subordinate Establishment	434	5	7			
Total of Establishment	2,371	14	4			
Do. Expenditure	3,802	5	3			
				6,174	3	7
Balance in favour of Government				10,678	6	4
				16,852	9	11
Balance of timber in Depôt on 30th April 1865	1,516	8	0			
Add felled during 1866	19,378	3	8			
Total	20,894	11	8			
Deduct timber sold in 1866, including supply to P. W. D. 16,070 6 4; Do. destroyed by fire 273 12 0	16,344	2	4			
Balance of timber on hand	4,550	9	4			
Deduct balance of timber in Depôt 30th April 1865	1,516	8	0			
Additional Stock	3,034	1	4			
Financial results in favour of the Collegal Forest	10,678	6	4			
Results for the year				13,712	7	8

(Signed) H. R MORGAN, MAJOR,
Deputy Conservator of Forests.

TABLE A

Statement shewing the Receipts, Expenditure, and the Financial Results of the undermentioned Forests for the official year 1865 66, *in contrast with the year* 1864-65.

Forests		Receipts: Timber, &c sold to the Public.	Receipts: Timber supplied to the D. P W	Receipts: Seignorage under License.	Receipts: Miscellaneous Receipts such as sale of Plank	Receipts: Total.	Expenditure: Pay of Supt and Establishment.	Expenditure: Working charges.	Expenditure: Office Contingencies	Expenditure: Total.	Financial Results: Balance in favour of Government.	Financial Results: Balance against the Forest	Remarks.
Mudumallai	1864 65	8,854 2 9	37,657 15 6	1,663 0 0	671 13 3	48,846 15 6	16,563 5 11	27,291 6 1	.....	43,854 12 0	4,992 3 6	..	
	1865-66	9,533 0 5	57,028 12 10	724 0 0	284 14 3	67,570 11 6	15,910 15 6	48,946 11 4	33 8 0	64,891 2 10	2,679 8 8	...	.....
Seegur and Sutteamungdum	1864-65	27,834 11 6	...	...	9 0 0	27,843 11 6	600 0 0	6,924 9 0	.....	7,524 9 0	20,319 2 6	...	.....
	1865-66	26,967 8 5	...	1,229 9 0	72 0 0	28,269 1 5	2,078 5 0	9,475 14 0	.....	11,554 3 0	16,714 14 5	..	.. ..
Neilgherry	1864 65	.. ..	91 8 0	4,826 7 1	66 0 8	4,983 15 9	1,864 2 7	1,947 9 5	.....	3,811 12 0	1,172 3 9	...	.....
	1865-66	... .	845 0 0	2,825 7 6	230 2 6	3,900 10 0	1,728 0 0	4,237 7 2	.....	5,965 7 2		.. 2,064 13 2	
Wellington	1864-65	.. .	153 0 0	486 14 0	140 0 0	779 14 0	543 15 3	1,039 0 2	.....	1,582 15 5	...	.....	803 1 8
	1865-66	...	20 0 0	543 0 0	1 8 0	564 8 0	480 0 0	1,688 5 3	.....	2,168 5 3	.	.. 1,603 13 3	
Bowany	1864-65	... .	...	477 6 0	62 6 1	539 12 1	1,068 0 0	1,044 13 10	.....	2,112 13 10		.. .. 1,573 1 9	
	1865-66	14,170 14 6	...	606 12 8	.....	14,777 11 2	2,330 0 0	5,575 11 8	.....	7,905 11 8	6,871 15 6		.
Collegal	1864 65	17,067 5 10	...	822 11 8	37 0 10	17,927 2 4	1,159 1 6	4,538 15 3	.....	5,698 0 9	12,229 1 7	.. ...	
	1865-66	16 036 2 10	34 3 6	782 3 7	... .	16,852 9 11	2,371 14 4	3,802 5 3	.....	6,174 3 7	10,678 6 4	... ...	
Abstract for 1865-66		66,707 10 2	57,928 0 4	6,711 0 9	588 8 9	131,935 4 0	24,899 2 10	73,726 6 8	33 8 0	98,659 1 6	36,944 12 11	3,668 10 5	
										Deduct excess of Expenditure over Receipts ..	3,668 10 5		
										Net profit...	33,276 2 6		
										Difference of value of timber added to store in 1865-66, as per Table B	62,979 3 3		
										Financial results for 1865 66 .	96,255 5 9		

OOTACAMUND, 1st *June* 1866

(Signed) H. R. MORGAN, MAJOR. *Deputy Conservator of Forests*

TABLE B.

Statement shewing the quantity of Timber felled and sold during the year 1865-66, *and the balance remaining on hand on* 30*th April* 1866, *in contrast with the year* 1864-65.

Forest.		Balance of Wood in hand on 30th April 1864-65	Value of Wood felled and brought to the Depôt in 1864-65 & 1865-66.	Total.	Value of Wood sold, excluding the amount realised by seignorage for Teak, &c., felled and removed under Licenses in 1864-65 and 1865-66.	Value of Wood supplied to D. P. W. from the Depôts.	Value of Wood destroyed by fire, white-ants, &c.	Total.	Balance of Wood on hand on 30th April 1866.	Deduct value of Wood on hand on 30th April 1865.	Net amount of Wood added to store in 1865-66.
Mudumallai...	1864-65	1,43,304 1 0	73,492 7 3	2,16,796 8 3	8,854 2 9	37,657 15 6	... ...	46,512 2 3	1,70,284 6 0	1,43,304 1 0	26,980 5 0
	1865-66	1,70,284 6 0	1,11,737 14 9	2,82,022 4 9	9,533 0 5	57,028 12 10	... ...	66,561 13 3	2,15,460 7 6	1,70,284 6 0	45,176 1 6
Seegur and Sutteamungalum.....	1864-65	15,985 13 11	32,394 6 4	48,380 4 3	27,834 11 6	... ...	... ...	27,834 11 6	20,545 8 9	15,985 13 11	4,559 10 10
	1865-66	20,545 8 9	49,207 13 7	60,753 6 4	26,967 8 5	... ...	... ...	26,967 8 5	33,785 13 11	20,545 8 9	13,240 5 2
Neilgherry.... Wellington....	1864-65	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...	... ...
	1865-66										
Bowany.....	1864-65	... ...	5,250 0 0	5,250 0 0	... ...	... ...	... ...	... ...	5,250 0 0	... ...	5,250 0 0
	1865-66	5,250 0 0	14,920 14 6	20,170 14 6	14,170 14 6	... ...	... ...	14,170 14 6	6,000 0 0	5,250 0 0	750 0 0
Collegal.....	1864-65	... ...	18,583 13 10	18,583 13 10	17,067 5 10	... ...	... ...	17,067 5 10	1,516 8 0	... ...	1,516 8 0
	1865-66	1,516 8 0	19,378 3 8	20,894 11 8	16,036 2 10	34 3 6	273 12 0	16,344 2 4	4,550 9 4	1,516 8 0	3,034 1 4
Abstract for 1865-66....		1,97,596 6 9	1,86,244 14 6	3,83,841 5 3	66,707 10 2	57,063 0 4	273 12 0	1,24,044 6 6	2,59,796 14 9	1,97,596 6 9	62,200 8 0

Remarks.—The amounts realized from seignorage on Teak, &c. were, in 1864-65, originally included in the heading of "Timber felled during the year," but subsequently expunged in the Central Office, hence the difference between the Table B. in the printed Annual Report and this table. The timber actually felled and brought to and sold, or supplied from the *Depôt* by the Department is shewn in this table also.

The timber cut by the D. P. W. from the Neilgherry Sholas and W. A Plantation cannot be shewn under the above reasons.

Ootacamund,
1*st June* 1866.

(Signed) H. R. MORGAN, Major,
Deputy Conservator of Forests.

TABLE C.

List of Advances outstanding in the undermentioned Forests on 30th April 1866.

Forest.	Balance remained unadjusted on 30th April 1865.	Advance made during 1865-66.	Total.	Value of Work done.	Amount recovered in Cash.	Total.	Balance remaining to be adjusted on 30th April 1866.	Remarks.
Mudumallai.								
1. Coorumbers	...	3,284 7 10	3,284 7 10	3,284 7 10	...	3,284 7 10	..	
2. Sawyers	829 3 7	230 2 7	1,059 6 2	540 5 1	48 3 0	588 8 1	470 14 1	
3. Bandymen	3,312 1 3	21,383 14 2	24,695 15 5	15,167 0 3	3,210 13 6	18,377 13 9	6,318 1 8	
4. Provision Contractor	3,769 8 1	13,132 0 0	16,901 8 1	10,084 10 6	3,060 8 0	13,145 2 6	3,756 5 7	
5. Paddy Contractor	246 12 0	1,000 0 0	1,246 12 0	1,246 12 0	...	1,246 12 0	...	
6. Provision in Store	4,675 9 3	12,860 8 6	17,536 1 9	11,641 5 1	2,578 10 6	14,219 15 7	3,316 2 2	
7. Miscellaneous	2,043 10 8	721 2 3	2,764 12 11	527 0 0	2,237 12 11	2,764 12 11	...	
8. Rent of Forest	3,500 0 0	3,500 0 0	7,000 0 0	3,500 0 0	...	3,500 0 0	3,500 0 0	
Total...	18,376 12 10	56,112 3 4	74,489 0 2	45,991 8 9	11,135 15 11	57,127 8 8	17,361 7 6	
	Office Contingencies charged in Working Charges Bill and subsequently struck out, but remained unadjusted on 30th April 1866						149 4 0	
	Unadjusted bill up to 30th April 1866						178 1 4	
						Total Rupees...	17,688 12 10	
Seegur and Sutteamungalum.								
1. Coorumbers	145 0 3	418 8 10	563 9 1	361 6 6	...	361 6 6	202 2 7	
2. Workmen	72 0 0	...	72 0 0	...	72 0 0	72 0 0	...	
3. Establishment	361 0 0	41 11 8	402 11 8	402 11 8	..	402 11 8	...	
Total...	578 0 3	460 4 6	1,038 4 9	764 2 2	72 0 0	836 2 2	202 2 7	

TABLE C.—*(continued.)*

List of Advances outstanding in the undermentioned Forests on 30th April 1866.

Forest.	Balance remained unadjusted on 30th April 1865.	Advance made during 1865-66.	Total	Value of Work done.	Amount recovered in Cash.	Total.	Balance remaining to be adjusted on 30th April 1866.	Remarks.
Neilgherry Sholas.								
1. Establishment.	.. ..	154 0 0	154 0 0	... .	100 0 0	100 0 0	54 0 0	
2. Miscellaneous	.. ..	2 0 0	2 0 0	2 0 0	... .	2 0 0	.. ..	
Total...	... .	156 0 0	156 0 0	2 0 0	100 0 0	102 0 0	54 0 0	
W A Plantation.								
1. Miscellaneous.....	... .	281 2 4	281 2 4	181 2 4	... .	181 2 4	100 0 0	
Total...	... .	281 2 4	281 2 4	181 2 4	... .	181 2 4	100 0 0	
Bowany.								
1. Establishment.....	38 0 0	30 0 0	68 0 0	... .	28 0 0	28 0 0	40 0 0	
2 Workmen	... .	148 0 0	148 0 0	148 0 0	... .	148 0 0	... .	
3. Miscellaneous.....	... .	2 0 0	2 0 0	2 0 0	... .	2 0 0	... .	
Total...	38 0 0	180 0 0	218 0 0	150 0 0	28 0 0	178 0 0	40 0 0	
Collegal.								
1 Office building contract.....	... .	300 0 0	300 0 0	.. ..	... .	... .	300 0 0	
2. Workmen.....	172 0 0	125 4 5	297 4 5	267 7 11	... .	267 7 11	29 12 6	
3. Miscellaneous.....	... .	3 0 0	3 0 0	2 0 0	... .	2 0 0	1 0 0	
Total	172 0 0	428 4 5	600 4 5	269 7 11	... .	269 7 11	330 12 6	
						Office Contingency....	4 0 0	
						Total. .	334 12 6	

Ootacamund, 1st *June* 1866.

(Signed) H. R. MORGAN, Major,
Deputy Conservator of Forests.

APPENDIX P.

SALEM, 1st *June* 1866.

From

LIEUT. C. WALKER,
Depy. Conservator of Forests.

To

CAPTAIN R. H. BEDDOME,
Offg. Conservator of Forests.

SIR,—I have the honor to submit my Administration Report for 1865-66.

1. I received charge of these forests on the 25th May 1865, from the Deputy Collector, who had been placed temporarily in charge on the removal of Mr. Spring in March 1865. I have, as directed, taken the advice and instructions of the Collector in all local matters connected with conservancy, and am happy to be able to report that no cause of complaint has arisen, and the working of the department has gone on smoothly, which I have every reason to hope will continue; new rates of seignorage have been introduced with the concurrence of the Collector, a copy of which has been submitted.

The Collector does not, however, consider himself legally entitled to punish under the Penal Code, depredators, &c. in Government forests, and consequently in many cases, where no doubt of a man's guilt existed, he has escaped punishment, simply losing his wood. I would request that this state of affairs, so damaging to the interests of our department, be immediately put a stop to, either by the Forest Bill being brought in, and rules framed thereon, or by obtaining a decision of the High Court as to the nature and legality of punishment for illicit felling, &c. &c., which would enable the Collector conscientiously to punish the offenders. I shall allude to this matter under para. 12. I have received every assistance and support from the Collector of South Arcot and all the revenue and other departmental authorities in both districts.

2. I have endeavoured in every way to protect the forests from illicit and indiscriminate felling and to prevent collusion on the part of our Pygusts and Peons, and can state that the measures adopted have not been without success; not only is less timber illegally felled, but the rate of detection is much increased.

I have visited and reported on the forests on Javadi and Yellagiri Hills as directed by order of Government No. 1710, dated 24th July 1865, and have proposed that certain tracts should be reserved.

A plan has been submitted for the working of the Denkencottah Forests on the close system and statements (of which amended copies are annexed), showing the probable rate of profit per hundred bandy loads. Establishment required, &c. I trust they may be approved of, and the latter sanctioned. I intend commencing the system as an experiment next month, as it has been already authorized (vide Proceedings of Government, Revenue Department, 17th September 1863, No. 223, and order thereon) and shall supervise it personally for some time. I have every reason to believe it will be successful. The repairing of the road from Denkencottah to Auchetty will, I understand from the Engineer in charge, be commenced at once.

A peon has been engaged, along with several Wudders, cutting creepers which injure the sandal trees on the Javadi Hills, and reports having up to date freed 508 trees of this pernicious parasite. He also reports 65 trees as ripe for felling in the limited tract he has as yet visited, which is satisfactory. Contractors are now busily engaged in felling and preparing sandalwood on the Javadies, and a good out-turn is hoped for during the present year.

No arrangement has been made for buying or leasing the rights of cutting timber on the numerous Jagheers and Mootahs scattered over these districts, in accordance with the suggestion made in para. 5 of the Officiating Conservator's letter No. 681, dated 12th September 1863, laid before Government on the 17th idem. It would be of the greatest benefit if something could be done in the matter, although I fear the actual quantity of timber growing in these jungles would not justify our giving any but a very small sum, although the exclusive right of felling would be of great value to us. At present this is generally granted for a small sum per annum by the proprietor to a contractor who issues passes at low rates to all comers who frequently cut their wood in Government forests, as our peons cannot know actually where each tree is cut and dare not arrest any timber on suspicion. Great loss of revenue and detriment to Government interests are the natural results. I alluded to this matter in my letter No. 214 of 3rd September 1865, and think if the Collector be addressed on the subject, some satisfactory arrangement might be made.

Large quantities of firewood are supplied by contractors throughout the district to the Railway Company. I was surprised, on looking into our accounts, to find that we realized little or no revenue from this source; on enquiry, I found that almost all these men were supposed to be cutting on Mootah lands, having, according to their own statement, purchased the right to do so for ridiculously small sums. I inspected most of these Mootahs (adjoining the line of railway) and in every case found that but little firewood was to be found in them, the quantity being in all cases quite inadequate to supply the railway locomotives at the average rate of consumption, about 6,300 lbs. monthly. I have given this matter a great deal of attention, and find that there is no doubt that in most, if not all cases, these Mootahs were but a pretext, the wood being drawn from Government jungles, and passed free of seignorage, on the plea of being brought from Mootahs. I found also that the Railway Company were, in most cases, actually paying enhanced rates to these very men from their representing that they had to pay the Government seignorage of annas 6 per 1,000 lbs. I estimate the revenue lost in this manner at not less than Rupees 200 monthly. I have now concluded a new arrangement with the Locomotive Superintendent of the Railway, by which the Company will pay the seignorage directed on all fire-wood supplied to them by contractors, who will only be allowed to cut in tracts laid off from time to time for that purpose, instead of indiscriminately as has hitherto been done.

I have every reason to hope this arrangement will produce an increased revenue, whilst it will enable us at any time to check the rate of cutting in any one part of the jungle. It would, I think, be advisable to conserve in both districts one or more tracts of fire-wood jungles as lately done by the Collector of Nellore, as although there is no reason to apprehend an actual scarcity of fire-wood, at least in Salem for some years, there is no doubt that sooner or later the want will be felt.

I have introduced a system of License register which enables me and the Overseers to know accurately when and where timber is being cut and the dates when each license expires; an efficient supervision can thus be exercised. If practicable, trees to be felled will, at least in the more thickly-wooded tracts, be marked by myself or any subordinates as recommended at various times. Such a course would doubtless be of great advantage, but from the extent and scattered state of these forests, it involves a great expenditure of time, which we cannot well afford. I shall endeavour, during the year, to prepare forest charts on a fixed scale, showing generally the tracts of forest containing Sandal and other valuable woods in any quantity. The forests in these districts being, as mentioned above, thin and scattered, renders this a matter of time and difficulty.

3. The quantity of Sandalwood felled, collected and stored, is maunds 1,501. This is the amount actually taken over, and would have been much larger had not the late Head Overseer, Mr. Guieselar, failed to obey instructions. Large quantities of Sandalwood, now being prepared both in Denkencottah and Javadies, cannot be shown, as the accounts are not yet adjusted.

4. We have no establishment of cattle, &c. in these districts. When the close system is introduced in Denkencottah, it may be found advisable and more economical to maintain a few bullock carts, &c.

5. The quantity and quality of timber, &c. removed during the year from the forests in each district on license is as follows :—

Statement shewing the number of bandy loads of timber taken on license during the year 1865-66.

Range.	1st Class.		2nd Class.		3rd Class.		Total.	Remarks.
	Rough.	Worked.	Rough.	Worked.	Rough.	Worked.		
Salem.....	500	876	378	425	1,077	447	3,703	
South Arcot. ...	115	131	266	34	456	10	1,012	
Total...	616	1,007	664	459	1,533	457	4,715	

6. The number of logs, &c. of confiscated timber, &c. sold by public auction is shewn below, also the amount remitted to the Treasury after deducting rewards, &c.

Statement shewing the quantity and description of confiscated timber, &c. sold in public auction in Salem and South Arcot Forests, during the year 1865-66.

No. of Logs.	No. of Beams, Troughs, and Planks.	No. of Bandy-loads.	Remarks.
198 Nummai. 53 Vengay. 4 Kullemadrai. 38 Kuhtooroonjee. 1 Jalari. 15 Kadambai. 9 Vagai. 2 Parambai 3 Porooso. 1 Eroovadi. 19 Acha. 147 Junglewood.	2 Atcha. 3 Junglewood. 1 Vagai. 1 Kaliatcha. } Beams. 2 Atcha. 3 Parambai 1 Vengay } Troughs. 14 Junglewood planks.	279 Bandies of firewood. 2 Do. Kaliatcha. 57 Do. Junglewood. 3½ Do. Teak spokes. 4½ Do. Rose and Satin wood. 15 Do. Naga Dindiga. 1 Do. Dindoga. ½ Do. Tumbai. ½ Do. Vambai. 1 Do. Vangay. 1 Do. Eroovadi. 31¼ Do. Bamboos. 4½ Do. Charcoal. 1¼ Do. Soorcolbark. 2 Do. Avarumbark.	A sum of Rupees 1,286 has been realized on the whole (after deducting rewards, &c.) and remitted to the Treasury during the year.

The above proves that the peons have not been idle, almost no wood having been confiscated on information received from out-siders. The plan generally adopted by merchants and which screened much smuggling, was to order the wood to be felled and squared, and when ready, they would take out a license for it. They then keep the license in their house; and in many cases I found that the bandy men got the wood passed in without detection, when the license doubtless seemed for another consignment. I have, I think, succeeded in almost putting a stop to this practice, and the Wuddors actually cutting, must now always have the license with them or near at hand, under penalty of having the timber confiscated.

7. (Sandalwood). The amount sold to merchants amounts to 2,713 maunds, which realized Rs. 10,292-5-7. The sandalwood at Denkencottah was put up to auction in lots of maunds of fifty, but the first six lots not fetching the upset price, I stopped the sale. Tenders were afterwards called for, and a merchant of Bangalore tendering the highest price obtained at the auction for all the prepared sandalwood, his tender was accepted and the wood delivered in February last. I received also a tender for the sandalwood now lying (prepared) at the foot of the Kullamalays,

and for the prepared roots in Denkencottah, which was accepted, but the man failed to appear or make his deposit, and although several letters have been written to him, no answer has been received. I am now causing enquiry to be made regarding him, and should I find that he is a man of substance, shall, after giving him due notice, sell the wood at his risk, and should there be a loss on the original tender, commence proceedings against him to recover the amount with godown rent and other expenses.

8 No timber has been supplied to the Public Department from the forests during the year under review.

9. The outstanding advances amount only to Rupees 160-3-6, of this Rupees 70-3-6 is part of an old advance made to Poojaries in the Denkencottah range. They have, in most instances, got sandalwood almost ready to deliver which will more than cover it, and had not the late Head Overseer failed, as before said, to carry out his instructions, it would ere this have been wiped out.

Rupees 90 is shown as outstanding to contractors on Javadi Hills; this is within the amount authorized by the Conservator in his letter No. 1606, dated 17th February 1866. This amount, though shown as an advance, consists actually of payments made on account of work done, but as the wood cannot be weighed or taken over till dry, the accounts cannot be finally adjusted.

10. No trees have been planted during the year, but the ground is now being got ready and fenced at Mullapooram for an extensive plantation of Babool (Accacia Arabica) which, it is hoped, will turn out well. Sandalwood and teak seed has been supplied to the Collector, who is about making the experiment of planting them on the slopes of the Shevaroys, the expense being defrayed by local funds. I am anxious to make a similar attempt on a somewhat larger scale during the present year, by sowing Chittagong (Cedrela Toona) on the north-east slopes. It grows abundantly on the Hills, although nearly all good sized trees have been felled and would form a valuable reserve for the future, the wood is highly prized and could be reared at little cost; the sole danger being the periodical fires

11. The valuable dyes and forest products of the districts are now, with the exception of one or two barks allowed to be collected free of seignorage, Government having, by their Proceedings No. 332 of 22nd August 1864, and order thereon, directed the discontinuance of petty farms. I cannot, however, see any objection to the department itself collecting them for sale. At present the only gainers are the merchants, who can have no *claim* to those products, the Poojaries would much prefer collecting them for us, and at present a great proportion of the nuts, &c. are never collected at all. I beg to point out that if we can increase our revenue by such means, it would better enable us to grant real concessions, and to increase our plantations, whilst it would not only be a hardship, but actually a boon to those most concerned, namely, the hill men. I received an order lately from the Conservator to provide 5lbs of Kuplapudi (Rottlera Tinctoria), and am really at a loss how to obtain it under existing rules, save through the merchants.

12. As already stated in para. 1, the want of a Forest Act, with rules framed thereon, or at least of some definite instructions to Magistrates with respect to prosecutions for forest depradations, is much felt. A conviction and punishment can never be relied upon, as it rests entirely upon the manner in which the Magistrate, before whom a case is brought, reads and interprets our rules with reference to the Penal Code, and in all cases of appeal against convictions by the Subordinate Magistrates Mr. Arbuthnot has, however, unwillingly felt himself bound to release the appellant This is most prejudicial to the interests of the department, as the natives, in most cases, do not understand the real state of the case, and the idea gets abroad that the wishes of the Collector and those of the Forest officer are antagonistic, and that what is done by the latter will not be supported by the former. Much illicit felling is, I am sure, carried on in this belief. I have, however, on the whole, been fortunate in obtaining convictions in the majority of the cases brought before the Magistracy for felling without license, or on license of which the date has long expired. In particular, in a case at Hurroor, where a man (a timber merchant of great influence) felled timber on a large scale without a license, was detected by Overseer Mahomed Ali,

who prosecuted the case before the Head Assistant, who fined him 50 Rupees. This case was most important, and attracted great attention at the time, as it was the first time a conviction had been obtained against a man of position in the Hurroor range ; great efforts were made to get him off and the Police were, I am sorry to say, not unbiased. I brought this latter circumstance strongly before the Assistant Superintendent, which resulted in the Inspector being reprimanded and the Head Constable reduced two grades. The conviction was of the greatest benefit in restraining illicit felling ; the timber had, I think, been felled with the intention of passing it without license if possible, and if not taking out licenses for it as related to be a common practice in para. 6. In South Arcot I have almost invariably obtained convictions, and offenders have been strictly and promptly dealt with.

13. The health of the establishment has, on the whole, been good. One peon died in Denkencottah, when fever was very prevalent in December last. I have suffered on several occasions from fever, but not of a virulent description. The Overseers have all suffered more or less. Mr. Mahomed Ali had a sharp attack after returning from the Javadies and Yelagiries in October last.

14. No plants or trees deserving of notice have been discovered during the past year

15. I trust that the working and financial results, as shown below, will be considered satisfactory. The actual profit falls short of last year by Rupees 10,490-15-7, but it should be remembered that many concessions have been made that forest products, dyes, &c., have been allowed to be collected free, and that for nine months in the year the seignorage on bamboos was abandoned. From this latter source alone I calculated that the applicant for the Kollaymullay's sandalwood, &c. having failed to claim his wood, has also lessened our receipts by at least 1,200. These circumstances will, however, tend to augment greatly the receipts for the present year which will, I trust, prove largely in excess of those now shown. The increase are payments on account of fixed establishment is caused by the difference of pay of the Deputy Conservator for 1865-66, and that of the Sub-Assistant acting, as occurred, throughout 1864-65.

Mr. Guiozelar, formerly in charge of Goomsur, was appointed in July last to the Head Overseership and charge of Denkencottah range. I had great hopes of his doing well, in which I am sorry to say, I was utterly disappointed. He proved utterly useless, never leaving his head quarters, and totally neglecting his duties, though repeatedly warned. I was at last obliged to suspend him and recommended his dismissal, which was done on the 20th April 1866 , a successor has not yet been nominated. It is most important that a honest and active man should be sent at once, as the preparation of the sandalwood requires constant and careful supervision, and every thing is in disorder through Mr. Guiezelar's negligence. Mr. Mahomed Ali, who acted for a year in Denkencottah, gave every satisfaction, and has since been doing well in Hurroor. I propose promoting him to Head Overseer, but cannot spare him from the Hurroor range, where he is busily engaged in working the sandal tracts on the Javadie Hills, forming plantation at Mullapooram, &c. He has also lately been looking after some of the Denkencottah work, in addition to his other duties.

Mr. Lloyd, formerly acting at Hurroor, has reverted to the charge of South Arcot, where he has succeeded in augmenting the revenue ; should this continue, I would suggest that his pay be increased, as that at present given, namely, Rupees 30, is manifestly inadequate for a man whose principal duty constant travelling entails great expense An increase might, I think, be granted as travelling allowance, which could be withheld monthly if the Overseer failed to supervise his range with activity. This is the more necessary, should it be deemed advisable to place part of the Javadie Hills adjoining the South Arcot District, under the supervision of this Overseer, as I suggested in my report on those hills.

The pay available for the Denkenicottah range will thus be Rupees 60, and I think some travelling allowance should be given; in fact, it will be imperative if we commence the close system.

I have the honor to be,
Sir,
Your most obedient servant,
(Signed) C. WALKER, LIEUT,
Deputy Conservator of Forests, Salem and South Arcot.

Financial results of the Salem Forests, 1865-66.

Receipts.	Rs.	A.	P.	Rs.	A.	P.
I. Sale of timber and Sandalwood brought to Depôts by Government agency	10,292	5	7			
II. Sale of timber, firewood, bamboos and charcoal removed from the forests by purchasers, including seignorage	17,343	14	7			
Sale of confiscated timber, deducting 50 per cent. of the sale proceeds paid to the informants of clandestine felling, vide G. O. No. 921 dated 4th May 1865	1,254	4	7			
VI. Sale of fruits and other minor forest produce	5,724	14	5			
Miscellaneous receipts	118	13	1			
				34,734	4	3
A. *Conservancy and working.*						
Expenditure.						
I. Timber expenses, felling, clearing, sawing and transport of timber by land or water to Depôts	857	4	5			
VI. Plantations	30	4	0			
VII. Forest work, viz., cutting creepers, protection of forest trees against fire	5	0	0			
Total of conservancy and working				892	8	5
B. *Establishment.*						
I. Salaries.						
Pay of Deputy Conservator	5,312	14	5			
2. Pay of the Executive Officers	1,380	0	0			
3. Pay of Office Establishment	815	4	11			
C. *Executive.*						
4. Forest Conservancy Establishment	3,292	7	0			
5. Timber Depôt and Working Establishment						
6. Special allowances	130	10	3			
II. Travelling allowances.						
2. Executive Officers	100	5	0			
3. Subordinate Establishment	185	12	11			
III. Contingencies (office).						
4. Sundries	95	15	10			
Total of Establishment				11,313	6	4
Do. Expenditure				892	8	5
Grand Total				12,205	14	9
Balance in favour of Government				22,528	5	6
Balance of timber in Depôt on 30th April 1865				10,495	0	0
Add felled during 1865-66	5,542	10	1			
				5,542	10	1
Total				16,037	10	1

	Rs.	A.	P.	Rs.	A.	P.
Deduct timber sold in 1865-66.....	10,292	5	7			
				10,292	5	7
Balance of timber on hand				5,745	4	6
Particulars of timber on hand and valuation:						
Sandalwood (maunds 1106, lbs. 4.) in Denkencottah Depôt at Rs. 3-12-0 per maund of 28 lbs.....	4,148	0	6			
Sandalwood Roots (maunds 278, lbs. 10) in Denkencottah Depôt at Rs. 3-8-0 per maund of 28 lbs.....	974	4	0			
Sandalwood (178 maunds) Sandamungalum store at Rs. 3-8-0 per maund of 28 lbs.....	623	0	0			
				5,745	4	6

Note.

The above is the actual amount taken over and the accounts for which are fully settled; the following might however be added, which isbeing prepared, and is almost entirely covered by advances.

On Javadie Hills about maunds 1,000 at Rs. 3-8-0.	3,500	0	0			
Denkencottah in the hands of Poojaries, maunds 800 at Rs. 3-12-0.....	3,000	0	0			
				6,500	0	0
Total Rs...				12,245	4	6
Total Rupees				5,745	4	6

(Signed) C. WALKER, Lieut.,
Deputy Conservator of Forests.

Financial results of the South Arcot Forests, 1865-66.

Receipts.	Rs.	A.	P.	Rs.	A.	P.
II. Sale of timber, firewood, bamboos and charcoal removed from the forests by purchasers, including seignorage.....	2,796	9	4			
Sale of confiscated timber, deducting 50 per cent. of the sale proceeds paid to the informants of clandestine felling vide G. O. No. 921 dated 4th May 1865.....	31	11	5			
				2,828	4	9
Expenditure.						
B. *Establishment.*						
Pay of the Executive officer.....	360	0	0			
Total of Expenditure...				360	0	0
Balance in favour of Government				2,468	4	9

(Signed) C. WALKER, Lieut.,
Deputy Conservator of Forests.

APPENDIX Q.

From

MR. E. THOMPSON,

Assistant Conservator of Forests, South Canara.

To

CAPTAIN R. H. BEDDOME,

Officiating Conservator of Forests.

SIR,—I have the honor to forward my Annual Report on the forests of South Canara, for the official year 1865-66, which have been under my charge throughout the year.

Forest operations.

2. In Sooliah and Maloot Forests there were 25,508 teak saplings pruned and cleared of all creepers and underwood. These saplings, together with those pruned last season, are doing well; many lakhs more throughout these forests remain to be yet pruned. Felling and dragging timber in these forests were also carried on.

In Soobramoney jungles the principal works consisted of felling and floating timber. There is no teak, except a few hundred trees about Punjah. The principal timber trees of this range are Wild-jack (Artocarpus hirsuta), Siri poona (Calophyllum), Blackwood (Dalbergia latifolia), and junglewood of different kinds.

In Oodipee range the principal works were felling and forming Depôts on the different roads leading to the principal towns of the district. In exploring the Ghaut forests of this taluq, I came upon a tract of about 20 square miles of forest, where I had found Cardamoms, the extent whereof I was unable to ascertain, owing to their having overgrown with weeds and underwood. This jungle contains very fine timber of the following kinds, viz., Gajja-mara, Siripoona, and different other junglewood. In an hour's walk through this jungle 1,000 Siripoona and the same number of Gajja-mara might be reckoned, one-half of which are fit for cutting; the average height of a Siripoona tree in this jungle is about 70 feet. Spars were taken out of this jungle some sixteen years back on Government account, but I would deem it unwise to bring them out to the coast on speculation.

Timber supply.

3. On the 30th April 1866, a number of 6,228$\frac{1}{8}$ Bombay candies of timber of all kinds, 90 spars, 14 boats, 6 kalpoona planks, and 1,590 bamboos valued at Rupees 34,096-15-8 were in store in the different depôts which are formed on the banks of rivers outside of jungles or roads leading to the chief towns of the district, where it was expected that I would be able to dispose of the timber, more particularly as the merchants complained much of the loss they sustained by having abolished the License system, but when the timber was offered for sale they did not appear to recollect their loss and made no offer for the same. I then decided that it would be better to take the timber to the coast and store it there. The greater part of the timber at Maloot is already brought down, and preparations are in progress for floating the timber from the Sooliah Andoor and Haspott to the coast. About 600 candies of timber from the Soobramoney jungle are coming down to Mangalore. They would have been here in April had not the Overseer been detained owing to the coolies having deserted, in consequence of the small-pox then prevailing amongst them, and by the time he collected them the water in the river had so much abated, that it rendered it difficult to float. Had this timber arrived in time the receipts would have been greater than the expenditure, as a ready sale would no doubt have been effected.

Elephants and other cattle.

4. There are no elephants or any other cattle belonging to Government. Dragging operations are all carried on by hired elephants, and they are so few in this district, and the owners so independent, that the department cannot always avail itself of their services when required. There has been a loss of upwards of 1,000 Rupees this year, owing to an elephant merchant having declined to allow his animals to drag the timber, felled for a bridge near Jedkul, in Coodapoor taluq required by the Engineer's Department, who would not grant a voucher until the timber was delivered on the spot, he having at the same time stated that they are at present rather fatigued, and that their services

would be allowed in two months hence. If the department had their own elephants the timber could have been made over, and a receipt obtained prior to the close of the year. A sum of Rs. 5,603-0-0 has been disbursed on elephant hire alone, but if the department had their own elephants the expenditure would have been considerably diminished, and it would not have amounted to more than 2,480 Rupees, thus leaving a clear saving of a sum of Rupees 3,123, enabling us at the same time to have the work done when required.

Seignorage

5. The seignorage is small this year, in consequence of the tax upon bamboos having been abolished at the commencement of the year, and on firewood previous to the preceding two months of the close of the year, all the scrub jungles having been made over to the Collector from the 1st March 1866. The sums realized under this head are on timber supplied to ryots for their own use, and to the Engineer's Department, the latter having required timber in localities where it was inconvenient to work, which, together with other collections, amount to Rupees 5,279-7-8, as particularized below :—

		Rs.	A.	P.
Seignorage on	timber	2,832	5	10
Do.	Bamboos	281	6	7
Do.	Firewood	2,132	14	3
Do.	Charcoal	32	13	0
	Total...	5,279	7	8

Confiscated timber.

6. Under this head there had been a sum of Rupees 765-0-11 realized, the whole of which is what has been collected on timber, firewood and bamboos. The confiscation was not, however, effected from any clandestine felling, but for having violated the forest rules after obtaining licences for carrying on the operations, for which they were granted, the particulars whereof consist of the following items :—

	Rs.	A.	P.
Timber 215½ candies	706	7	8
Firewood 641 head-loads and 12 cargo boat-loads...	39	14	5
1 Boat	10	4	0
372 Bamboos	8	6	10
Total...	765	0	11

Sale of timber.

7. The sales have been very small, none of the merchants having attended any of the auctions, as they entertained an idea that the License system will be re-imposed. Ryots requiring a few candies of timber for their own use were allowed to fell within the limits of their own village on payment of the prescribed rates of seignorage on each kind of timber. The chief cause of not being able to sell timber from Depôts arise principally from a rumour that the License system would be re-imposed, which, in my opinion if brought to pass, will debar all sale of timber on hand. I have, however, no authenticated information on the subject, but it has been current in Mangalore and Oodpee, the merchants of which places, although badly in want of wood, refuse to make any bargains, alleging that they will rather prefer to wait until this system is re-imposed, when they will be at liberty to cut timber from Government forests.

Timber supplied to the P W Department

8. The Public Works Department felled the greator part of the timber themselves on License system, permission having been granted before the order for discontinuing the issue of licenses had been received. They had 45½ Bombay candies of timber, the value whereof, including the price of three boats supplied to the Collector for Rupees 99 at 33 Rs. each, amount to a sum of Rs. 325.

Outstanding advances

9. Under this head I have nothing to say except that there are no advances made. Payments are made daily or weekly as the money is required by the parties concerned.

Plantations.

10. During the year a space of 14 acres of virgin forest had been cleared, and planted out; 14,000 teak plants were put in last July, and some of them are now six feet high. The old plantation was pruned, the earth loosened round the plants, and all the casualties re-planted. The plants, though they are alive, grow very slow, which shows that old Coomry ground is not fit for planting purposes.

A space of 25 acres of forest has been cleared, and is now ready for planting when the monsoons set in. There are sufficient plants in last year's nursery for this year's planting. There has been also a new nursery formed this year for the next year's planting. Both the new and old nurseries look well, very few of the seeds sown this year having missed.

Forests products.

11. The chief forest produce in this district is Cardamom, but the principal jungle belongs to a ryot by name Venket Hebarah. The jungle is about 80 square miles in extent, and is supposed to yield about 150 moorahs of cardamom The other cardamom jungles are small and so much scattered, that no one will make a contract for them.

The new cardamom tract found in Tingalamaki appears to be extensive, but no estimate could be formed of its value unless the plants are exposed out by clearing the underwood and weeds.

Of the gums there are white and black dammer trees, the former in abundance, but neither are collected for sale or export.

Trespass.

12. We have nothing to complain of under this head during the year, having suffered no damage from cattle.

Health of establishment

13. The health of the establishment, on the whole, has been good, there having been no cases of sickness amongst them except a few slight attacks of fever.

New or rare plants

14. Under this head I have nothing to mention, as nothing new or rare was found during the year.

Summary of operations.

15. In Sooliah pruning, planting, clearing ground for new plantation and felling, had been carried on.

In Soobramoney the principal operations were floating, felling, and dragging timber.

In Oodpee, felling and dragging operations were carried on. No work has been done in Coondapoor, as I did not consider it advisable to trust peons with money for felling purposes, but as Mr. Wilson is placed in charge of that range, and as he has got a stock of timber in Someshwar, I intend to work the Coondapoor jungle during the present year. I have two jungles marked off for felling purpose, one of which is on the Halady river and the other in Wundsey; both jungles are about thirty miles inland from the coast.

The chief cause of falling off in the revenue arises from Mr. Overseer Gowdie being unable to get the timber down to Mangalore in time for sale during April. His first delay was caused from a dam constructed across the river, which he was not allowed to open; however, he unclosed it at his own risk, repairing the same after floating the timber down. The next delay was the prevalence of small-pox amongst labourers who, in consequence whereof, deserted and could not be induced to return, until the villages were reported clear of the disease; thus by the time labour was procured, the water in the river had been lessened so much, that it was quite out of power to float timber.

Another incident was, there were no mango showers this year; had there been a little rain, the timber might have been floated down quicker than it was anticipated.

The timber on hand on the 30th April, are 6,228¾ Bombay candies of all kinds, 90 spars, 14 boats, 6 kalpoona planks and 1,590 bamboos, valued at Rupees 34,096-15-8 which are all out of the jungles, stored on the banks of rivers or roads leading to the chief towns of the district.

Financial Results.

Receipts.	Rs.	A.	P.	Rs.	A.	P.
Sale of timber brought to Depôts by general agency.....	2,763	9	0			
Value of timber supplied to D. P. W.....	226	0	0			
Value of three boats supplied to the Collector.....	99	0	0			
Sale of timber, firewood, bamboos, and charcoal removed from the forests by purchasers, including seignorage.....	2,279	7	8			
Sale of confiscated timber.....	765	0	11			
Sale of cardamoms.....	91	0	0			
Miscellaneous receipts.....	8,045	0	0			
Total receipts...				17,269	1	7
A. *Conservancy and Working.*						
Expenditure.						
Timber expenses for felling, clearing, sawing, and transport of timber by land or water to Depôts.....	2,668	1	2			
Purchase of tools and plant.....	3	12	0			
Elephant hire for dragging timber, including hire of coolies for making drag-ropes.....	6,166	2	4			
Plantation.....	1,040	9	9			
Forest work, viz., cutting creepers, protection of forest trees against fire.....	206	11	7			
Experiments to test the value of timber of different kinds.	99	15	6			
Communications, buildings, and minor works.....	561	9	8			
Total of conservancy and working...				10,746	14	0
B. *Establishment.*						
Salaries.						
Pay of Executive officer.....	2,145	0	0			
Office Establishment.....	780	0	0			
C. *Executive.*						
Forest conservancy Establishment.....	3,811	4	2			
Travelling allowance.						
Executive officer.....	567	0	0			
Contingencies.						
Stationery.....	137	15	6			
Total of Establishment and Contingencies...				7,441	3	8
Total of Expenditure...				18,188	1	8
Deficit against Forest.....				919	0	1
Balance of timber in Depôt on the 30th April 1865....	26,884	14	11			
Add timber felled during 1865-66.....	9,237	12	0			
Total...				36,122	10	11
Deduct sold in 1865-66.....	2,763	9	0			
Value of timber supplied to D. P. W.....	1,548	8	0			
Do. destroyed by white ants, &c.....	154	12	0			
				4,466	13	0
Balance of timber on hand, 30th April 1866.....				31,655	13	11

Particulars of timber on hand and valuation.

	Rs.	A.	P.	Rs.	A.	P.
Value of timber on hand 30th April 1866.....	31,655	13	11			
Deduct balance of timber in Depôt on the 30th April 1865,.....	26,884	14	11			
	4,770	15	0			
Deduct deficit against South Canara Forests.....	919	0	1			
Results for the year 1865-66.....				3,851	14	11

(Signed) E. THOMPSON,
Assistant Conservator of Forests, South Canara.

APPENDIX R.

MANANTODDY, 28*th May* 1866.

Annual Administration Report of the Wynaad Forests for the official year 1865-66.

During the past year the expenditure and receipts have been, as follows:—

Receipts.	Rs.	A.	P	Rs.	A.	P.
Realized by sale of Wood in cash.....	29,303	9	6			
Timber supplied to Public Departments.....	3,347	2	6			
Total...				32,650	12	0
Expenditure.						
Cost of establishment.....	9,559	3	9			
Working charges.....	10,966	13	11			
Total...				20,526	1	8
Balance in favour of the forest.....				12,124	10	4
Value of timber unaccounted for on 30th April 1865....	34,648	0	0			
Add felled during the year..... ...	21,839	15	3			
Total Rupees...	56,487	15	3			
Deduct sold during the year.....	25,793	2	3			
Balance.....	30,694	13	0			
Add value of timber transferred from the Hoonsur Depôt.....	10,357	7	9			
Total...	41,052	4	9			
Deduct timber on hand on 30th April 1865...	34,648	0	0			
	6,404	4	9			
Add balance in favour of the forest...	12,124	10	4			
Results for the year 1865-66...	18,528	15	1			

In the above balance of 15724¼ cubic feet of teak are included 9,110 cubic feet sold for Rupees 6,692-0-7 not paid for within the year, and therefore carried on to next year's account.

Major Gib was in charge of these forests till the 1st August, when I relieved him. Of the timber on hand which was felled in the Hoonsur forests 8569¾ cubic feet have been sold, though paid for too late to be shewn in this account. The sum of Rupees 563-15-7 for 540¼ cubic feet of teakwood is still due by the Commissariat Department, Bellary.

The boundary of the Mysore country is still in parts not well defined, though much has been done towards rendering boundary disputes impossible. The Mysore Forest Department has felled some teak in a spot about three miles from Goondry Depôt which, in my opinion, is within

the Wynaad boundary. The Assistant Conservator of these forests has, however, on being applied to, ordered that this timber should be left where it is, until he and I have visited the spot together and ascertained the correct boundary.

The quantity of timber felled during the past year has been 20461½ cubic feet, and that removed to depôts 22652½ cubic feet. Of this 19356 cubic feet, have been stored in Goondry Depôt preparatory to being floated down the Cubbany river at the end of the rains, and the remainder 3296½ cubic feet to Autersimtah.

The sling carts purchased for the use of the department have not answered so well as was expected, as from their size it is difficult to use them in some places where they would be most useful. Some much larger sized logs than usual have however been carted to Goondry this year, and I hope after the monsoon to be able to get the Cooroombors instructed in the use of the saw, by which some logs, too large for any cart, may be converted into plank. The carts have been placed for work under a contractor, who supplies bullocks and repairs the carts when required. The two pairs of bullocks purchased for the carts by the department were made over to him at cost price, namely, Rupees 270, so that the only debit against the forest on this account is Rupees 348, the price of the carts. The charges for carting have been very high this season, owing in part to the unhealthiness of the forests, and partly to all the timber from the Coorcheat forests having now to be carted to Goondry by a much worse road than that by which it used formerly to go to Baigoor.

The value of timber sold has been Rupees 29,237-5-6, and that supplied to Public departments Rupees 4,698-13-6, giving a total of Rs. 33,936-3-0. The greater part of the above sum was realized from the produce of the Wynaad forests, so it is hoped that in future these forests will pay the expenses of conservancy well. Of the outstandings Rupees 291-5-4 have been recovered from a Cooroombor through the Mysore Forest Department. There is one item of Rupees 191-5-0, which, it is feared, may take some time to recover, as the individual to whom the money was originally advanced lives at a village (Narsapoor) some way to the north of Mysore. The Amildar of the taluk was written to on the subject some time back, but no reply has yet been received. The remaining outstandings will, it is hoped, be recovered shortly, but it is impossible to avoid advances to Cooroombers, as they will not work without them.

The year has been very unhealthy; one Gomastah died shortly after dismissal in July, and a second resigned from ill-health. The Head writer, Madava Row, also died while away on sick leave. The forest establishment has suffered much from fever.

The following list of trees, being the same as those selected to be sent to the Secretary of State, is appended. The Canarese name only of most is known, but next year I hope to be able to supply a complete list of all the timber trees to be found in these forests.

Canarese Names	
Mutty.	Terminalia Coriacea.
Honah.	Pterocarpus marsupium.
Iti or kurpha	Dalbergia latifolia.
Tany.	Terminalia bellerica.
Komanji	A good building wood.
Komalay.	A hard wood (Prosopis.)
Kadagoody	
Tarasy.	
Kylijic.	(Rosewood)
Godil.	
Kad Hulsoo.	Pterocarpus hirsutus.
Vellay Mutty or Dindua.	Conocarpus latifolius.

(Signed) W. FULLERTON, LIEUT.,
Deputy Conservator of Forests.

APPENDIX S.

NELAMBUR, 19*th May* 1866.

From

MR. J. FERGUSON,
Asst. Conservator of Forests.

To

CAPTAIN R H BEDDOME,
Offg. Conservator of Forests.

SIR,—I have the honor to forward the Annual Report of the Nelambur Forests for the official year closed, 30th April 1866.

2. In last year's plantation three thousand yards of ditching have been cut to improve marshy parts of the soil.

3. Timber felled of all descriptions; upwards of one thousand logs and nearly the same number and twenty-five thousand saplings have been stored in Kalais Depôt. Transporting stock from forest to Depôt has been almost done by contracts, executed by the Tasildar of Ernood, and (very unsatisfactory as the contracts are not yet completed) when requested to expedite the work, he always promised to make the contractors finish the work within the stipulated time; however such was not the case, and months after the expiration of the time when solicited, the Collector issued orders to carry on the work with more energy, and hopes are now entertained the contracts will be completed shortly.

4. Elephants entertained to drag timber are either hired or Commissariat cattle.

5. Cash realized by private sales and public auction in Government Depôt amount to Rs. 14,621-7-11, and value of timber to be accounted for in Depôt, Rs. 21,371-12-3, and in forests Rs. 28,028-0-0, only aggregating Rs. 49,899-12-3 to be accounted for in 1866-67.

6 Amount advanced on floating operations during the year Rs. 2,778-13-7, and work executed for Rs. 2,333-0-8, leaving a balance of Rs. 445-12-11 unadjusted and to be accounted for in 1866-67.

7. *Plantations.*—55,000 teak seedlings have been planted out, (about half the ground prepared last season has been taken up, the remainder is available for the present year). Owing to the early and continual rains in April and May last year the seed did not germinate freely and the plants were not fit for planting out in the season, hence half the usual number pnt in the plantations are looking tolerably well, but very much in want of rain. Considerable portions have suffered from fire which has been more severe and frequent than formerly (said to be owing to the extra dry season), they have been reported and investigated by the Police, with what result is not known, as a precaution the Plantations were properly fire-traced all round.

8. Fever has been prevailing as usual, and several deaths have occurred in the establishment, which is always in a broken, disorganized state, and others deterred from joining it

9. *Operations.*—Planted fifty-five acres, weeded two thousand and five hundred, pruned four hundred and twenty-six, ready for fresh planting one hundred acres, timber felled 1000 logs, dragged to river bank seven hundred and sixty saplings, felled thirty-five thousand, collected twenty-two thousand. Timber transported to Depôt nine hundred and eighty-six, logs and saplings twenty-five thousand, bamboos eight thousand.

Receipts and expenditure for the year show a balance against the forest of Rupees 1,937-11-0, caused mainly by the depressed state of trade in the Bombay markets, also a Ship Captain bought stock to the value of Rs 9,000, in the months of December and January respectively, and failed to fulfil his agreements, preferring to pay a penalty of Rupees 1,000 on the first, and

Rupees 2,000 on the second agreement, but at his (Captain Gamble's) request, the Collector referred the case to the Board of Revenue, who generously reduced the penalty from 3,000 to 500 Rupees, whereby we show a balance against the forest in place of in favour of Government, otherwise had the Board been pleased to confirm the penalty, Rs. 3,000, which, together with Rs. 266-8-0, value of saplings removed but not paid by Captain Gamble, as also Rs. 728-2-0 sales effected in April, but not credited in the Treasury accounts for that month, making the total of Rs. 3,954-10-0, and deducting deficit, would still have shewn a slight balance in favour of Government of Rupees 2,016-15-0, and the last item Rupees 782-2-0 will be credited in May, but Captain Gamble's penalty Rs. 500 and Rs. 266-8-0 (as already said value removed, but not paid for) has yet to be recovered through the Collector's Office.

Financial Results.

Receipts.	Rs.	A.	P.	Rs.	A.	P.
I. Sale of timber brought by Government agency.	4,585	14	0			
Bamboos	719	13	11			
VI. Miscellaneous receipts.						
Saplings	9,306	8	0			
Teak seed	9	4	0			
Total....	.....			14,621	7	11
A. Conservancy and Working.						
Expenditure.						
I. Timber expenses for felling and transport by land or water	4,051	10	5			
II. Purchase of Plant	71	13	0			
III. Keep and hire of Elephants	392	0	11			
IV. Rent of leased forest	12	5	10			
VI. Plantations	7,001	4	0			
X. Buildings	5	0	0			
Amount passed in the Revenue Contingent Bill for June and September 1864	1,514	7	9			
Total...	.....			13,048	9	11
B. *Establishment.*						
C. *Executive.*						
4. Forest Conservancy Establishment	1,751	15	9			
5. Timber Depôt	761	10	4			
II. Travelling allowances	490	0	0			
2. Executive officer	2,016	10	8			
III. Contingencies	4	12	0			
Total establishment.....	.....			5,025	0	9
Total expenditure ..	.....			18,073	10	8
Balance against the forest...	3,452	2	9			
Balance of timber on hand 30th April 1865	41,841	4	2			
Add timber felled during 1865-66	22,677	0	0			
Total Rupees.....	64,518	4	2			
Deduct timber sold in 1865-66	14,621	7	11			
Balance of timber on hand 30th April 1866	49,896	12	3			

Particulars of Balance on hand.

			Rs.	A.	P.
Teak	Logs	600	16,846	10	3
Benteak	„	780	4,132	2	0
Kurramurdah	„	320	3,330	0	0
Poomurdah	„	190	1,331	0	0
Erool	„	265	1,523	0	0
Saplings	„	41,663	22,734	0	0
Value of timber on hand 30th April 1866			49,896	12	3
Deduct value of timber on hand 30th April 1865			41,841	4	2
Additional stock			8,055	8	1
Add value sold but not paid for			766	8	0
Financial result			8,822	0	1
Deduct deficit			3,452	2	9
Results for the year			5,369	13	4

(Signed) J. FERGUSON,
Assistant Conservator of Forests

APPENDIX T

RUSSELCONDAH, 30*th June* 1866.

From

MR. T. G. T. MACCALLY,
Overseer of Forests.

To

CAPTAIN R. H. BEDDOME,
Offg. Conservator of Forests.

SIR,—I beg to submit my Annual Report for the official year 1865-66.

2. I assumed charge of the Gumsur and Surradah range in June 1865. During the year I have visited its forests in different directions, and traversed nearly all the villages of Gumsur with the view of strict conservancy, so as to prevent any infringement of the forest rules, having found occasionally visiting the forests and constantly patrolling villages to be the best plan for conservancy in the Gumsur taluk, for from the great extent of country which these forests cover, forming parallel ranges and patches between villages and mootahs, and each having its own wants of firewood to seek from them, it would be impossible with the small establishment I have, to keep the inhabitants of them under check if patrolling was not adopted.

3. Sâl has been the principal wood used by the ryots for all purposes, but they have now understood by the conservancy to adopt other kinds of wood instead, unless they are disposed to pay seigneurage. The privilege of their having unreserved kinds of wood for building purposes free of taxation, have been appreciated in their re-building about 400 houses which had been burnt during the year, and they have now no reason to complain.

4. The Sâl (Shorea Robusta) is the principal wood in this district used for building purposes, and the Pia Sâl (Pterocarpus Marsupium) is its equal in the construction of doors, windows almirahs, boxes and articles of furniture, though of no great size in these forests, will be soon denuded, as the ryots, considering it next to Sâl, naturally fell it wherever it can be found for the construction of their houses. This valuable wood being not abundant in these forests, if it could be brought under the reserved kind, would prevent its being exterminated. This tree yields the kind not known to the natives here, a valuable remedy for dysentery and diarrhœal disorders

5. The Pia Sâl is common in the Bodogodah Zemindary forests, and from the sale of it the Zemindari derives some revenue.

6. The Holondha (Nauclea Cordifolia) is another wood of the unreserved kind used in this district for similar purposes as the Pia Sâl, and for canoes, impervious to white ants, which is not common in these forests, being brought under the reserved kind, would also be saved from being exterminated.

7. The Pia Sâl and Holondha are the two kinds of valuable wood which the carpenter and builder cannot do without in the Ganjam District, and these have not been brought under the reserved kind.

8. In portions of the forest between Joggunnathprasard and Balasye, I have seen hundreds of Sundia Gundie trees (Rottlera Tinctoria), from these the Khunds of the villages in the vicinity collect the fur of the ripe seed capsules and sell to traders, who send it as an article of commerce to their agents at Berampore. This fur is the Kamela used in medicine, as well as for dyeing silks of an orange colour.

9. The Bael (Ægle Marmelos) also in this forest with the Rottlera Tinctoria, cover patches of ground resembling plantations. The fruit of the bael is used medicinally in dysentery and diarrhœa, and also in the preparation of lime for the buildings.

10. The Palsoo Creeper (Butea Frondosa), Chiretta and Sarsaparilla medicinal plants are common in the Gumsur forests.

11. Since my assuming charge of this department, the Executive Engineer of the district has been furnished from time to time with such wood he required at the expense of the forest Department.* These forests have now been for the first time directly worked by having wood-cutters on the small advances without the aid of contractors. Quantities of wood are occasionally received from the forests and stacked at this place. I have thus established a depôt for the sale of timber.

* While formerly at his own expense on the permit of the Forest Department.

12. Timber of large dimensions, 24 feet long by 1 foot square, and poles of 25 feet long by 1 foot diameter at upper end, have also been required; although procurable, great difficulty is felt to get them carted from the forest, where there are no road. From the want of suitable carriage and good strong cattle, the department is entirely crippled, being unable to comply with demands punctually, and in this respect it is entirely dependent on the will and pleasure of cart owners, which would not be the case if it had a few timber carriages with good strong buffaloes at its disposal.

13. The best of timber from these forests have been removed by the public before the conservancy was in existence, and the Commissariat Department then had their best selection of Sâl from the Kookloobah forest about ten years ago. Forty-one of the remaining logs belonging to it I discovered at the request of the Collector, and carted from thence to the port of Ganjam in October and November last. The selection of good logs now is becoming from day to day more difficult and expensive from the distance and inaccessible portions of the forests where they are to be found.

14. The zemindary of Badogodah and Ronabah sell wood to the public. Traders of Berampore generally go to the zemindary, having only to pay a fee of a few annas per cart to entitle them to the best selection, and it is only when they fail to get wood there of required dimensions, they look to the Government forests for it; if these estates could be closed from this speculation, a great revenue would be derived from the sales of timber, as the public would depend on the Government forest and depôt for it.

15. *The sales from Zemindary Estates.*—Bunjur owners disposing the wood of their lands without restriction, and the free use of the bamboo jungles are great obstacles to the collection of Government seignorage.

16. The revenue for the year has, I regret to say, been less from the failure of the rains,

destruction of the crops, and scarcity of all grains. Cholera and small-pox, prevailing to a fearful extent in this taluk, since the last six months, the famine increasing and deaths from cholera and starvation of daily occurrence. The demands for timber beyond that, for the Department of Public Works, has been very little.

17. From the present distressed state of Gumsur, I entertain doubts of being able to work the forests to the extent proposed in my estimate for 1866-67, which was prepared in September last, having then not the least idea that there would be a failure in the rains, and famine would be the result, as the revenue is entirely dependent on the welfare of the population. The distressed state of this taluk I beg will meet with due consideration.

18. A hundred Sâl plants were removed from the Bopungy forest to be sent to Madras, but they have, one by one, withered and died after removal from their present soil, although every care had been taken of them, leaving only 15 remaining, which are in a thriving condition. I intended to procure fresh seeds as soon as they come to perfection, and replenish the number of plants from seed, if possible.

19. I have endeavoured to raise a few plants in my office compound with the view of placing them in conspicuous places in the forests as soon as they are able to endure the change of transplanting and exposure, which are the following, not in the Gumsur forest .—

American Gum Plants six, and expect a hundred more from seed, which are germinating ; Babool seeds sown are germinating.

Teak seeds sown, but not germinated.

I have four teak plants, which I got from the Aska Factory in October last, are in a thriving condition, and in size the largest three feet in height, and the smallest six inches from the grounds.

Of the seeds received from the Collector, namely,—

Eucalyptus.
Blue gum tree.
Red gum.
Atherosperma Moschata Sasfras.
Acacia Melanoxylon.

Only 50 seeds of the Acacia Melanoxylon germinated, and were in a thriving condition, attaining the height of six inches from the ground, every care having been taken of them with respect to temperature since October last ; but from the unusual great heat of the weather during the last four months, with hot winds, the thermometer in shade being 110°, they have, one by one been scorched, withered and died, leaving only six, which are in a thriving condition, and these would have been destroyed by locusts which covered this place by clouds on the 12th, 14th, and 15th instant, had not every precautionary measure been taken for their preservation.

20. Myself, writer, and ten peons have all been suffering occasionally from fever, and one peon from the small-pox. The work of this office having been greatly increased since my charge, induces me to solicit a small increase to the writer's pay. The pay of the peons of this establishment, viz., two at Rs. 5, two at Rs. 4, and six at Rs. 3 each, is utterly insufficient for their maintenance ; at the present day rice is sold at four to five seers per rupee, calculating one seer or two pounds of rice per day was quite sufficient per man ; it would cost him at least 6 Rupees in rice alone, without considering the families they have to maintain. These peons have worked hard and are under much privation since the beginning of the famine. Considering the itinerant nature of their duty, and the difficulties they are exposed to, I would beg that you will be pleased to gain sanction for their pay being increased, similar to that drawn by the Revenue peons of this district, viz., Duffadars at Rs. 8, and Peons at Rs. 6 each.

21. The financial results for the year attached, shows a balance against the forest, but the value of timber felled during my charge and remaining at the depôt of Russelcondah, on being sold, will adjust it.

22. The expenditure I have incurred not only includes felling and carting to Russelcondah Depôt and to Gopalpore, but also the carting of old wood from the forests to Gopalpore, and to the Depôt of Russelcondah, as will be seen from the particulars of wood in different places noted below.

Russelcondah Depôt.	Sâl Logs.	Sawn Logs.
Felled and carted to Russelcondah Depôt from June 1865 to 1st May 1866	1,143	94
Deduct sold during the year	317	20
	826	74
Carted to Gopalpore Depôt	22	51
	804	23
Sâl timber at Aska	5	0
Remaining at Russelcondah on 1st May 1866	799	23
Also 40 logs of 1864-65 carted from Forest.		
Timber in Forest of 1864-65. Total	303	
Deduct carted by Forest Depôt in 1865-66 to Gopalpore	43	
Do. to Russelcondah Depôt	40	
Remaining in forest 1st May 1866	220	
Timber at Gopalpore Depôt counted in 1864, when I took charge	822	0
Delivered by contractor in 1865-66	42	0
Total	864	0
Wood of 1864-65, carted from forest to Gopalpore by Forest Department	43	0
Wood from Russelcondah Depôt, carted by Forest Department to Gopalpore	22	51
Remaining at Gopalpore, 1st May 1866	929	51

Abstract.

Timber at Gopalpore Depôt 1st May 1866	929	51
Do. in Forest of 1864-65	220	0
Do. at Russelcondah Depôt of 1864-65	40	0
Do. at do of 1865-66	799	23
Do. of 1865-66 at Aska	5	0
Total	1,993	74

Financial Results.

	Rs.	A.	P.
Expenditure.			
Establishment	1,896	15	2
Working charges	6,843	5	10
	8,740	5	0
Receipts.			
Sale of timber	2,655	9	9
Balance against the forests	6,084	11	3

	Rs.	A.	P.
Timber in depôt on 30th April 1865.....	0	0	0
Add timber felled during the year.....	9,575	9	9
Deduct sold.....	2,065	9	9
Balance on hand...	7,510	0	0
Deduct balance of cash against the forests.....	6,084	11	3
Results for the year...	1,125	4	9

I have the honor to be, &c,

(Signed) T. G F. MACCALLY,

Overseer of Gumsur and Surada Forests.

Proceedings of the Madras Government, Revenue Department, 28th May 1867.

Read the following letters from the Officiating Conservator of Forests :—

(Here enter 20th June 1866.)

ORDER THEREON, 28th May 1867, No. 1203.

1. The receipts in the Forest Conservancy Department during 1865-66 amounted to Rupees 3,21,581, and the expenditure to Rupees 2,59,802, whilst the additional value of timber stored during the year was Rupees 41,959.

Forest, No. 13.

2. The net profit was less than in the previous year by Rupees 72,133. The causes of this decrease appear to have been the abolition of the seignorage on bamboos, which was re-imposed in March 1866, and the difficulty in disposing of the timber stored in the various Depôts.

3. A condensed statement is subjoined comparing the expenditure, receipts, and value of stock in the several Ranges during 1864-65 and 1865-66. The Conservator will in future embody a similar Statement in his report :—

Ranges.	Charges.	Expenditure	Receipts, seignorage, and sale of Timber.		Value of stock of Timber on the 30th April.	
	1864-65.	1865-66.	1864-65.	1865-66.	1865.	1866.
	RS.	RS.	RS.	RS.	RS.	RS.
Gumsoor and Surada	1,747	8,740	6,446	2,656	.....	7,510
Golcondah	.....	410	.....	27	.....	.....
Cuddapah	6,795	7,223	29,164	27,493	3,089	7,042
Kurnool	4,903	9,652	39,482	33,671	155	1,471
North Arcot	1,053	2,392	4,238	5,620	.....	704
South Arcot	308	360	4,196	2,828	.....	.....
Madura	3,478	5,599	6,383	6,529	4,478	566
Annamallay	31,146	28,445	21,032	11,184	3,13,767	2,81,904
Chenat Nair and Bolumputty	208	1,097	988	361	.....	2,317
Mudumallay	43,855	64,891	48,847	67,571	1,70,284	2,15,461
Seegur and Suttiamungalam	* 7,525	11,554	* 27,844	28,269	* 20,545	33,786
Neilgherry	3,812	5,966	4,984	3,901	.....	.....
Australian Plantation	1,583	2,168	780	565	.....	.....
Bhowany	2,113	7,906	540	14,778	5,250	6,000
Collegal	5,698	6,174	17,927	16,853	1,516	4,551
Salem	8,820	12,206	40,332	34,734	10,495	5,745
South Canara	15,984	18,788	21,183	17,269	26,885	31,667
Wynaad	15,924	20,526	10,254	32,651	32,236	41,052
Hoonsoor	4,613	.....	18,791	.....	17,161	.....
Nellamboor	16,039	18,074	27,159	14,621	41,841	49,897
	1,75,604	2,31,571	3,30,570	3,21,581	† 6,47,702	6,89,663

4. The Government do not understand why the value of timber in store on the 30th April 1866 in the Madura Range is stated to be Rupees 2,805 at page 5 of the Report, and Rupees 566 in the table of financial results.

5. The Government observe, with satisfaction, that the works on the plantations of Teak, Eucalypti, and Acacias were pushed forward with energy and success in the year under report.

6. The desirability of extending the Forest Act to this Presidency is under consideration, and the Board will be requested to expedite the transmission of the report called for in G. O. 15th October 1866, No. 2799.

(True Extract.)

(Signed) W. HUDLESTON,

Secretary to Government.

NOTE.—The figures marked thus * relate to Seegur only.

† Corrected in the Report for 1865-66 to Rupees 6,47,702.

‡ Printed apparately.

ERRATA.

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6	.....	33	.....	1	*for* Reveuue—*read*—Revenue.
11	.....	65	.....	8	*for* Contractors—*read*—Contractors'
13	.....	88	.....	3	*for* Seedings—*read*—Seedlings.
23	.....	17	.....	5	*for* propose—*read*—purpose.
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43	.....	10	.....	18	*for* in the this Range—*read*—For in this Range.
45	.....	7	.....	2	*for* Moosinigoody—*read*—Musinigoody.
47	.....	14	.....	2	*for* Vylore—*read*—Bylur.

REPORT

OF THE

CONSERVATOR OF FORESTS,

FOR THE

OFFICIAL YEAR

1866-67.

MADRAS:
GANTZ BROTHERS,
ADELPHI PRESS, 175, MOUNT ROAD.

1867.

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APPENDIX.

A List of new and rare plants drawn in the office of Conservator of Forests in 1866-67.

B Description and plates of the South Canara Ebony and the Red Cedar tree.

C Report on the Forest of Worygum, Tagutty and Billy Kul, in the Denkencottah Talook.

D. Gumsur and Surada Forest Report.

E Cuddapah Forest Report.

F. Kurnool Forest Report

G. North Arcot Forest Report.

H. South Arcot Forest Report.

I. Madura and Tinnevelly Forest Reports

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Q. Australian Plantation Report.

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S. South Canara Forest Report.

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OFFICE OF CONSERVATOR OF FORESTS:
CAMP OOTACAMUND, 1*st April* 1867.

From

CAPTAIN R. H. BEDDOME,
Officiating Conservator of Forests.

To

W. HUDLESTON, ESQ.,
Secretary to Government, Revenue Department,
Fort Saint George.

SIR,—I have the honour to forward the Annual Report for my Department, for 1866-67.

2. During the months of May and June, the Officiating Conservator was in charge of the Anamallay Range, and he handed over charge of that range to Lieutenant Foord on the 7th of July. During July he went a tour in the Madura District; in August he visited the Nellumbur Teak plantations, in September the Mudumallay and Seegoor forests and establishments, and in October the Salem and Cuddapah Ranges. On the 14th of October he again assumed charge of the Anamallay Forest Establishment, on account of the illness of Lieutenant Foord, and he handed over this range to Lieutenant Gosling on the 25th of the same month, and then went a tour through the district with that Officer. In December he went a tour through the Kurnool forests, and again visited Cuddapah. In January and February he visited the Wynaad forests and supervised the demarcation, and in March he made a tour in the South Canara forests. During the year he constantly visited the different plantations on the Nilgiris.

3. GUMSUR.—*Sale of the Sâl logs.*—The Collector of Ganjam ordered the sale of the Sâl logs in depôt at Gopalpore, about one thousand in number, without any reference to the Forest Department, and as the sale was only advertised a few days before it took place, and the advertisement only put into the *District Gazette*, the price realized was very small, being only Rupees 4-8 per log, or about what the timber had cost the department.

4. *Operations.*—These forests are chiefly worked by the License and Voucher System, but the more valuable tracts are now reserved to be worked by the department for Government purposes, as there is always a considerable demand from the Department Public Works. The Forest Overseer has thoroughly explored all the forests, and has reserved certain tracts, and the felling under License is regulated according to the supply in the different forests.

5. *Revenue and future operations.*—The seignorage collections have been less this year than they were in 1865-66; this is attributed to the prevalence of famine in the district, and to the large quantity of building timber given free of charge to ryots, whose houses (200) had been burnt. The forests this year show a considerable surplus owing to the sale of the Sâl cut last year; this surplus only covers the deficit of last year, and little or no revenue can be expected from these forests as worked at present; the receipts will, however, always cover the expenditure, and the forests will be strictly conserved and will be found of great value in future years; there does not seem to be a great demand for Sâl timber at present, probably because the market is well supplied from Burmah and elsewhere, and the value of Sâl timber is not generally known. Should a large demand arise, these forests might be worked with a regular establishment, and yield a good revenue. Timber of large scantling cannot, however, be got out without elephants, and until there is a certain market, it would not be advisable to have a large establishment, or to go to great expense in the purchase

of plant and elephants. The subject has already been brought before Government by the Officiating Conservator, (vide G. O. No. 772, dated 3rd April 1867).

6. *Sâl seeds and plants.*—Several attempts have been made to raise the Sâl seed in other districts, but the seed (though despatched immediately it has ripened) has never germinated. There are several other species of Sâl found in the Madras Presidency, all of which have been fully commented on by the Officiating Conservator in his Report for 1865-66, page 17. The true Sâl, however, is only found in this Presidency, in the Ganjam District, and in the forests of the Godavery. The Overseer brought down thirty young plants to Madras last February, and these were handed over to the Gardens of the Agri-Horticultural Society.

7. *Financial results.*

Expenditure.	Rs.	A.	P.	Rs.	A.	P.
Establishment	1,825	5	4			
Working charges	1,000	0	0			
Contingencies	167	7	0			
				2,992	12	4
Receipts.						
Sale of Timber from Depôts	6,162	12	6			
Seignorage	2,158	12	8			
Timber supplied to D. P. W.	2,735	2	1			
				11,056	11	3
Deduct expenditure				2,992	12	4
Balance in favour of forests				8,063	14	11
Value of Timber on hand, on 31st March 1867.	1,403	4	0			
Do. do. on 30th April 1866.	7,510	0	0			
Deduct deficiency in stock of timber				6,106	12	0
Financial results for 1866-67, Net Surplus				1,957	2	11

8. Vizagapatam.—Golcondah Hill Forests.—*Changes in Establishment.*—Mr. Leonard, the Forest Overseer of this Range, not being found qualified for the post, was removed, and a Mr. Power was put in charge on the 29th of October ; but having suffered much from fever, he resigned his post, and Mr. Tamplin (formerly employed in a Coffee Estate in the district) was nominated by the Collector on the 1st of April 1867.

9. *Forest exploration.*—The Officiating Conservator had made arrangements for visiting these forests in December, but he was prevented from doing so, as he was ordered by Government to meet Dr. Brandis, the Inspector General of Forests, who was expected to arrive at Bombay from England in the middle of that month. Dr. Brandis' departure from England was postponed, and his contemplated tour through our Presidency was never made, but as he was expected every mail till the end of March, the Officiating Conservator could not proceed to the eastern side of the Presidency

10. *Forests handed over to the Collector.*—There is at present little or no demand for timber in this district, and what little there is has been supplied from the Zemindary forests. The Government forests form a valuable block which should be strictly conserved for future years; they have hitherto been under the charge of a 3rd Class Overseer on Rupees 60, with an establishment of four peons. An Overseer such as can be procured on this small salary is not likely to be equal to all the office work required by the Special Department, and it was felt that his time would be better employed in the forests. The Officiating Conservator therefore recommended to Government that these forests should, for the present, be placed under the Collector, and this was sanctioned (vide G. O. 20th November 1866, No. 3168). The expenditure for the year has been Rupees 1,094-14-10, and the receipts Rupees 183-10-0, leaving a balance against the forest of Rupees

911-4-10. This is a large sum to pay only for guarding the forests, the receipts will probably increase; unless they cover the expenditure it would be advisable to put two Native Duffadars in charge, in place of an Overseer. They might receive Rupees 15 each, and be under the orders of the Head Assistant Collector, who is stationed near the forests. Unless the forests are to be worked, this will probably be the best plan under any circumstances, as the forests are very unhealthy and no European or East Indian Overseer will be got to remain for long.

11. CUDDAPAH.—*Forest operations.*—A small amount of timber is cut annually by the Department to supply our depôts which were established to meet any emergent demands from Government Departments, the Railway, and the public; with this exception, the forests are all worked on the License System: it works well in this district, and from the very straggling nature of the forests, must remain in force to a great extent. The tracts in which felling is allowed are regulated according to the amount of timber available in the different forests, and when tracts require rest, felling is stopped. Some of the more valuable tracts of forest are reserved for departmental working, and these are consequently brought under much more systematic working. It is proposed to extend the depôts gradually, and to bring large tracts under this system.

12. *Smuggling.*—Smuggling has been rather on the increase during the year; the Sub Assistant Conservator attributes this to the great distress prevailing in the district during the greater portion of the official year. Forest theft, when clearly proved, has always been punished in this district by fine or imprisonment.

13. *Fever and Cholera very prevalent.*—Both Fever and Cholera were very prevalent during the year; the Sub Assistant and almost all his establishment have been several times prostrated by the former.

14. *Plantations.*—The Red Sanders plantation promises very well, and does great credit to the Sub Assistant Conservator. Two thousand plants were put out from the Nurseries during the year.

15. *Fuel reserve.*—A large tract of forest near Balapilly is now being fenced in as a fuel reserve for the supply of firewood to the Railway Company. If fire and cattle can be successfully kept out, reserves of this kind will be found far more remunerative than planting on this side of the Presidency.

16. *Depôt.*—Rupees 2,033-2-8 were realized during the year from the sale of timber from the Codoor Depôt; this was chiefly supplied to the D. P. W., and was all cut by the department.

17. *Destruction of Forests by cattle.*—Cattle do an immense amount of damage in the Red Sandors and Aché *(Hardwickia)* forests. During one of his tours the Sub Assistant found that thousands of Red Sanders saplings had been cut down at the root for forage by some cow-herds on the Rolomadagu hill forests, where this tree grows very fine. Pasturage was very scarce at the time, and with the present state of Forest Law, it is difficult to say how far we can check forest grazing, but there can be no necessity to cut a tree bodily down when only the leaves are required.

18. *Revenue.*—The receipts for the eleven months have been Rupees 25,876-12-8, and the expenditure 6,262-11-0, against Rupees 27,493-7-3 and 7,223-5-0 last year, and there is a stock of timber valued at 7,564-5-3 against 7,041-15-11, the value on hand at the close of last year.

19. *Financial results.*

Expenditure.	Rs.	A.	P.	Rs.	A.	P.
Establishment	3,979	0	0			
Working charge	2,252	1	0			
Contingencies	27	12	0			
				6,258	13	0

Receipts.	Rs.	A.	P.	Rs.	A.	P.
Seignorage	23,413	2	0			
Sale of Timber from Depôt to Public	504	12	8			
Do. do. D. P. W.	1,528	6	0			
Confiscation	430	8	0			
				25,876	12	8
Balance in favour of Forests				19,617	15	8
Value of Timber in Depôt on 30th March 1867,						
4783¾ cubic feet at 1-4-0 per cubic foot	5,978	13	3			
1585¼ cubic feet at 1-0-0 per cubic foot	1,585	8	0			
	7,564	5	3			
Deduct value on 30th April 1866	7,041	15	11			
Add surplus stock of timber				522	5	4
Financial results for 1866-67, Net Surplus				20,140	5	0

20. KURNOOL.—*Decrease in revenue.*—There has been a considerable decrease in the revenue for the eleven months under review; it is, however, fully accounted for by the Sub Assistant in his report, and is attributed to the famine in the Bellary District and the unusual amount of sickness and distress prevailing in this and the surrounding district, and also to the entire stoppage of the Madras Irrigation Company works; these latter are now resumed, and as there is a good harvest, prospects are better for the next year's revenue.

21. *Purchase of Elephants.*—Two powerful elephants have been purchased for these forests at a cost of Rupees 3,500; this will now enable us to bring timber of large scantling out of the forest, for which there is always a demand from the Public Works Department.

22. *Operations.*—As there has been very little demand for timber during the year, a small quantity only has been felled for our Depôt.

Ten thousand five hundred and fifty-six bandy-loads of timber have been taken out of the forest on payment of seignorage; 4,139 bandy-loads have been given to ryots free of seignorage.

Great attention has been paid to clearing creepers and destructive undergrowth and parasites from forest trees and saplings Loranths (parasites of the Mistletoe tribe) are very destructive to the healthy growth of some of our forest trees; the only remedy is to remove them and thereby prevent the spread of the seed.

The Sub Assistant Conservator has done all he can to check forest fires, but considerable damage still occurs.

Charcoal burning is now restricted to certain tracts marked out for the purpose.

23. *Iron forges.*—The iron forges all work in the heart of the forests, the executive Officer lately proposed that they should pay an annual or monthly sum for their wood (as is done by the Sandalwood stills in South Canara) instead of a payment by the load, the proposal was laid before the Board of Revenue, but they declined to alter the present system. A compounded payment would certainly be a good plan and save the forest department much trouble; it is, besides, the wish of the Iron Smiths: if sanctioned, the Collector could fix the amount. These forges require constant supervision from our department, or they would commit great havoc amongst saplings of the superior timbers.

24. *Confiscations.*—These realized Rupees 1,792-13-3 against 2,168-1-3 last year, which shews a decrease in smuggling. Forest theft, when proved, has always been punished in this district with fine or imprisonment.

25. *Teak Nursery and Plantation.*—A small experimental Teak Nursery has been formed, and one thousand plants are ready to be planted out with the first rains. An acre of ground has been cleared and one thousand pits are prepared. Teak grows very fine in some parts of the Nallay Mallay Hills.

26. *Australian Acacias.*—A good many of the Australian Acacias, which answer so well on the higher mountains on the western side of the Presidency, have been raised from seed: they all die when planted out, and the experiment will be abandoned.

27. *Cinchona.*—A case containing fifty-six plants was forwarded from Ootacamund for trial on the Nallay Mallays. The plants were planted out in the most favourable locality at an elevation of about three thousand feet above the sea, and all were carefully fenced in and they have been watered according to Mr. Melvor's instructions; thirty-two of these were alive and getting on pretty well, when the Officiating Conservator visited the locality last December. They are now reported to be drooping and not likely to live through the hot weather. The climate is far too dry for Cinchona.

28. *Plantations and avenues.*—The Sub Assistant has formed a plantation at Kurnool and given his assistance in avenue planting; he has also formed a good nursery for avenue trees at Nundial, and in this latter several thousand trees are now ready for planting out: these are chiefly Tamarind, Mango, Neem, and Casuarina. These operations, though conducted by the Sub Assistant Conservator, who has had great experience in arboriculture, are paid for out of the Jungle Conservancy Fund.

29.—*Grazing dues.*—The right to graze cattle in the Nallay Mallay forests is let out annually by the Collector for several thousand rupees, but the proceeds are credited to land revenue and not to forests. As these are reserved forests, and the establishment is constantly employed in checking the depredations of the cow-herds, who are always ready to cut down young saplings for their cattle, and to whom most of the Forest fires owe their origin; it would certainly be fair that the amount should be credited to the Forest Department. The Board of Revenue have been addressed by the Officiating Conservator on the subject.

30. *Health of Establishment.*—The season was a most trying one, Cholera and Fever having been very prevalent. Both the Sub Assistant Conservator and the Overseer were attacked with the former, and the whole establishment, without a single exception, have suffered from the latter.

31. *Future operations.*—The working of these forests has hitherto been almost entirely under the Licence System. Now that we have elephant labour, our Depôts will be enlarged, and it is hoped that ere long the superior tracts of forest will be brought gradually under Departmental working. No strict conservancy can exist under the Licence System, and the forests of the Nallay Mallays are so fine in comparison with any other tract on this side of the Presidency, it is a pity that they should not be brought under systematic conservancy. The revenue would of course suffer for several years, and a large expenditure would be necessary for roads, forest surveys, and demarcations, plant, elephants and cattle, and a considerable increase to the establishment would be necessary, the benefit, however, in future years would be very great. The Officiating Conservator explored these forests in 1862 and organized the establishment in the month of September in the same year. During the four years and a half they have been under the department, there has been a clear profit of upwards of 1,18,000 Rupees, after deducting all expenditure, this gives some idea of the value of these forests, and it may be added that this revenue has been entirely derived from timber (as grazing dues, &c. have not been credited to this department) and the forests have never been worked to anything like the extent they might afford.

32. *Financial results.*

Expenditure.	RS.	A.	P.	RS.	A.	P.
Establishment.....	5,335	1	3			
Working charges.....	5,700	0	0			
				11,035	1	3
				2		

Receipts.	Rs.	A.	P.	Rs.	A.	P.
Seignorage	18,985	6	2			
Sale of timber from Depôts	587	14	6			
Confiscations	1,792	13	3			
				21,366	1	11
Balance in favour of the forest				10,331	0	8
Value of timber on hand on 31st March 1867	12,235	1	8			
Deduct value in Depôt 30th April 1866	1,471	4	0			
Add surplus stock of timber				763	13	8
Financial results for 1866-67 Surplus				11,094	14	4

33. North Arcot.—*Decrease in revenue.*—The revenue has very much fallen off, Bamboos are the chief export from this district, and the seignorage was removed for some months, and before it was re-imposed the merchants had taken care to lay in a large stock. This district besides labours under great disadvantages, as only portions of the forests are under our department, the remainder being under the Jungle Conservancy. Monegars, and other native officials issue licences for timber, and there are numerous complaints from the Forest Officer of this district and of Salem, that this practice gives rise to much smuggling from their forests, and that it will be impossible to check it, if the system is not altered. The Officiating Conservator has communicated with the Collector on the subject, and the conservancy arrangements are now under the investigation of the Head Assistant Collector in communication with the Forest Officers of both North Arcot and Salem.

34. *Destruction of Saplings by Cattle Grazers.*—Great destruction of saplings by cow-herds and shepherds is reported. Young trees are constantly cut down bodily when only the leaves are required. Unless there is some strict law on the subject, it will be a difficult matter for the department to stop this practice; it has been carried out to a far greater extent this year than usual, owing to the general failure of grass pasturage. No one could imagine the damage done in this way to some forests unless they went into them and judged for themselves. In some tracts every sapling for miles is cut off close to the root by a bill-hook or axe.

35. *Financial results.*

Expenditure.	Rs.	A.	P.	Rs.	A.	P.
Establishment	2,107	0	0			
Working charges	10	0	0			
Total expenditure				2,117	0	0
Receipts.						
Seignorage	2,510	1	0			
Sales from Depôt	15	10	0			
Confiscations	217	12	5			
Total receipts				2,743	7	5
Balance in favour of forest				626	7	5
Timber in Depôt on 31st March 1867	688	9	1			
Do. do 30th April 1866	704	3	0			
Deduct deficit in Depôt				15	9	8
Financial results for 1866-67 Surplus				610	13	9

36. SOUTH ARCOT.—*Operations.*—The small forest tracts in this district have remained under the charge of Lieutenant Walker, the Salem Forest Officer during the year. They are worked entirely on the Licence System, and as they require rest and renovation, they are not worked more than is absolutely necessary.

The following list shows the amount of timber removed on License during the year :—

1,026	bandy-loads of	Timber.
107	do.	Bamboos.
369	do.	Firewood.
316	head loads	Timber
1.166	do.	Bamboos.
2,237	do.	Charcoal.

37. *Forest buildings.*—A small Forest Office and Store at Chengamah have been erected during the year.

38. *Damage by Cattle Drivers.*—The Deputy Conservator reports great damage to the forests by cattle drivers.

39. *Plantations.*—A site has been selected for a small experimental Teak Plantation.

40. *Forest Theft.*—Forest theft has always been punished, when proved.

41. *Financial results.*

	RS.	A.	P.	RS.	A.	P.
Expenditure.						
Establishment	330	0	0			
Working charges	150	0	0			
Total expenditure				480	0	0
Receipts.						
Seignorage, &c.	2,890	12	0			
Confiscations	109	13	0			
Total receipts				3,000	9	0
Balance in favour of forest ... Surplus				2,520	9	0

42. MADURA.—*Operations.*—4497½ cubic feet of timber have been felled by the department for the Depôts.

828 cubic feet have been sold for Rupees 1,138-15-8.

Seignorage collections have been Rupees 4,267-7.

Timber to the value of Rupees 547-9, has been supplied to the D. P. W.

All reserved trees cut upon the Licence and Voucher System have been marked by the Department. The Overseer reports that the timber merchants grumble at this order, as it gives them more trouble.

Conservancy, such as the cutting of creepers and undergrowth, has been carried out entirely by the fixed establishment, so that there is no charge under this head.

43. *Health of Establishment.*—This has been very good, with the exception of a part of the Cumbum valley ; this district is generally tolerably healthy.

44. *Teak stumps.*—There are numerous teak stumps (of trees cut in former years) in the forests of this district ; the Overseer reports that he thinks that these can be worked up with profit as spokes for carts, &c. ; the experiment is being tried.

45. *Demarcations.*—As reported in the last Annual Report, a demarcation of Government forests in this district is very necessary. The Zemindary Forests not being well defined, gives a great opening to smuggling. A separate report will be made shortly to Government on this subject.

16. *Bamboo seignorage.*—The bamboo seignorage was re-imposed last August.

47. *Revenue.*—Although a deficit of Rupees 336-7-10 appears against the forest, there is a surplus stock of timber worth at the lowest valuation Rupees 2,675-10-0, which gives a profit for the year of Rupees 2,339-2-2

48. *Financial results.*

Expenditure.	RS. A. P.	RS. A. P.
Establishment	2,986 7 0	
Working charges	3,477 11 6	
Total expenditure		6,464 2 6
Receipts.		
Sale of timber from Depôt	1,138 15 8	
Do. confiscated timber	158 11 0	
Seignorage, &c	4,282 7 0	
Timber sold to D. P. W	547 9 0	
		6,127 10 8
Deficit against the forest		336 7 10
Balance of timber in Depôt on 31st March 1867	3,241 9 11	
Deduct balance on 30th April 1866	565 15 11	
Surplus stock of timber		2,675 10 0
Deduct deficit against forest		336 7 10
Surplus of Timber		2,339 2 2

49. TINNEVELLY.—*Date of Forest being brought under conservancy.*—By the Government Order, No. 1742 of the 13th of July last, the forests of Waitrap and Vasadavalanur were brought under conservancy, and as a commencement, a small establishment at a cost of Rupees 54 per mensem was sanctioned.

50. *Increase to Establishment necessary.*—In his letter No. 2322 of the 17th of April last, the Officiating Conservator reported that the present establishment is quite inadequate for conservancy purposes, and has asked sanction for an increase amounting to Rupees 51 per mensem. This is authorized by the Revenue. The receipts for the eight months these forests have been under the Department are Rupees 2,288-11-6 against Rupees 129-2-1, the collections for the whole previous year when the forests were under the Revenue Authorities.

51. *Financial results.*

Expenditure.	RS. A. P	RS. A. P.
Establishment	339 15 6	
Office contingencies	22 13 0	
Total expenditure		362 12 6
Receipts.		
Seignorage	2,056 8 6	
Confiscation	232 3 0	
Total receipts		2,288 11 6
Balance in favour of the forest..... Surplus		1,925 15 0

52. ANAMALLAYS.—*Change of Officers.*—These forests were under the charge of Lieutenant Foord from the 6th of July till the 14th of October. He resigned on the latter date owing to ill-health, and the Officiating Conservator relieved him. Lieutenant Gosling assumed charge on the 25th of October.

53. *Renewal of lease.*—A small portion of the Anamallay teak forest is Government forest proper, but the larger portion belongs to the Nambudry of Colungode; the lease of this latter (it was only taken for sixteen years) expired on the 31st of December last. Government have sanctioned a renewal for a lengthened period, and the Collector of Malabar has been in treaty with the Nambudry; the terms have not yet been agreed upon, as the Nambudry's demands are preposterous The forest has been worked to a great extent and the profit that has accrued to Government since the commencement of the lease has been considerable. There is not much ripe teak now remaining, but an immense number of young trees coming on, which will be of great value in future years, and considering that the finest teak is grown in this forest, it will be a great pity if Government do not secure the lease. As a pecuniary transaction, it might not be a profitable one for years, but if the forests get into the hands of any timber merchant, all the young trees would probably be cut down at once.

54. *Operations.*—No teak has been felled this year, as there is a very large stock on hand A small quantity of superior blackwood was felled for the Gun Carriage Manufactory of Madras; a large quantity of timber has been removed from the forest depôts to the head of the timber slip, and to other depôts near the head of the slip. Owing to a strike amongst the Cart Contractors on the discontinuance of the advance system, this work was performed by the elephants. A large quantity of timber has also been slipped, and the usual operations of carting timber to Mungarah, and floating it down to the coast, have been carried on.

55. *Forest fires.*—All the depôts were thoroughly cleared before the annual fires, and there was no loss whatever from this cause.

56. *Cart establishment*—Upon the Government Order discontinuing the system of advances, all the Cart Contractors refused to work, except at exorbitant rates. Government subsequently sanctioned the formation of a small cart establishment, and forty strong carts were made up at Palghaut, at a cost of Rupees 27 each, and bullocks have been purchased; this will enable the establishment to keep a check upon the Contractors, and some of the latter have since come forward and are working at slightly advanced rates.

57. *Elephant establishment.*—Five of the six female elephants belonging to the establishment have calved, and one has now calved a second time. It is almost unknown for elephants to breed in captivity, and it is probably attributable to their being turned loose at night in their native haunts. An elephant farm on the Anamallays would probably be a remunerative speculation.

58 *Demarcation necessary.*—If the lease is renewed, a demarcation of the Government forests and the leased tracts will be necessary; if not renewed, the Government portion must be demarcated. The Officer in charge can draw up a chart at the same time

59. *Roads*—The road from the foot of the slip to Palghaut, and the branch road from near Colungode to Mungarah, require to be put into thorough repair; the subject is now under consideration, and will probably be referred to Government. The Colungode road is one of general traffic, and it is hardly fair that the Forest Department should be called upon for the whole cost of repair, and if this and the Mungarah road are repaired, they will be largely used and cut up by all the timber merchants from the Nambudry's forest, who will pay nothing towards the road; the best plan would be for the road to be repaired and kept in repair by Government, and a toll put on.

60. *Sales, cause of deficit, and future prospects.*—Timber to the value of Rupees 248-13-3 was supplied to D. P. W. at Coimbatore, and to the value of Rupees 11,618-10-8 to the Bombay Gun Carriage Manufactory, and these sums were realized. 2,450 Dockyard planks, valued at about 60,000 Rupees, were handed over to the Agents of the Bombay Marine at our coast depôts, but this sum has not yet been realized and fully accounts for the deficit which again appears against this forest. In addition to this, the Bombay Marine have indented for a further supply of 2400 teak planks, 100 logs (teak) and 100 logs (blackwood), and the Madras Gun Carriage Manufactory require 10,000 cubic feet of blackwood. The future prospects, as regards revenue, are therefore very

good, and if the forest communications are put into good repair, the receipts for the coming year will not be less than two lakhs.

61. *Ponachy forest.*—A contract to fell and remove timber from these forests (which contain a good quantity of second class teak and many fallen trees) was given to Mr. Lowry, a Coffee Planter, by whose agency these forests and a considerable portion of the Anamallays, hitherto quite unknown, is being opened out. 1378¾ cubic feet of teak was squared up and brought to the foot, and has paid a seignorage of Rupees 172-4-0, and more timber has been squared up, but owing to its not having been brought to the foot, has not been stamped by the department and is not paid for. Mr Lowry has stopped operations for want of funds, and wishes to carry on by means of a Company. The forests are not such as to authorize operations on a large scale, and a company was not in contemplation when Mr. Lowry was allowed to fell and remove timber in connection with his coffee operations. If a Company is to be formed, a regular lease will have to be drawn up, and the subject will be brought specially before Government.

62. *Financial results.*

Expenditure.	RS.	A.	P.	Rs.	A	P.
Establishment and Office contingencies.....	6,885	10	11			
Conservancy and working charges.....	12,250	12	0			
				19,136	6	11
Receipts.						
Sale of timber to Bombay Gun Carriage Department.....	11,618	10	8			
Sale of timber to D. P. W. at Coimbatore.. ...	248	13	3			
Seignorage.....	172	4	5			
				12,039	12	4
Balance against the forests.....				7,096	10	7
Value of timber on hand on 31st March 1867...				2,72,120	14	6

63. *Chenat Nair and Bolamputty.*—The resources of these forests have not as yet been satisfactorily developed, and the revenue is very small. Lieutenant Gosling has applied for an increase to the establishment, but interspersed as these tracts are with private forests, Zemindary and Devastanum lands, in all of which indiscriminate felling is being carried on, little or no revenue can be expected at present and an increase to the establishment would hardly be authorized. Conservancy is very important, as there is much valuable forest, and the surrounding tracts stand a chance of being denuded, this must be carried on with a small establishment, and the receipts should be made to cover the expenditure. Demarcation is necessary. A Parsee merchant who purchased a small experimental coffee plantation in the Upper Bolamputty valley from the late Collector, claims the slopes of the Bolamputty-ghaut, a valuable tract of forest, and has set up a claim to some blackwood that the department felled in these forests: the case is under investigation.

64. *Financial results.*

Expenditure.	RS.	A.	P	RS.	A.	P.
Establishment.....	1,127	12	8			
Conservancy and working charges.....	185	10	2			
				1,313	6	10
Receipts.....				213	0	0
Balance against forests.....				1,100	6	10
Value of timber on hand on 31st March 1867.	7,011	4	0			
Deduct value of timber on 30th April 1866 .	2,317	0	0			
Do. balance against forest.....	1,100	6	10			
				3,417	6	10
Surplus Rupees.				3,593	13	2

65. MUDUMALLAY.—*Operations.*—21637¾ cubic feet of teak have been felled and stored in depôt during the year at a cost of Rupees 2,020-6-4, (as there is a large stock of timber on hand, the felling operations have been limited).

13894¼ square feet of timber sawn.

20536 cubic feet of timber dragged from the forests to depôt by the elephant.

The departmental carts have conveyed 5452¼ cubic feet of timber from the depôts to Ootacamund, and 8305½ cubic feet from the forests to depôts.

Contractors carts have carted 31704 cubic feet from depôts to Ootacamund, and 507½ cubic feet from the forests to depôt.

66. *Sales.*—Timber sold to the public 1718⅝ cubic feet, which realized Rupees 4,237-12-8; to the Department Public Works 33096½ cubic feet (at Ootacamund), and 1150 cubic feet at the forest depôts, which realized Rupees 65,375-8-6.

67. *Teak plantations.*—The teak saplings show a fair growth, but nothing equal to that at Nellumbur.

68. *Financial results.*

Expenditure.	RS.	A.	P.	RS.	A.	d
Establishment	17,495	9	1			
Working charges	29,576	10	6			
				47,072	3	7
Receipts.						
Sale of timber to Public	4,237	12	8			
Do. do. to D. P. W	65,373	8	6			
				69,611	5	2
Balance in favour of forests				22,539	1	7
Balance of timber on hand 31st March 1867	1,94,775	1	6			
Balance of timber on hand 30th April 1866	2,15,460	7	6			
Deduct deficiency in stock				20,685	6	0
Result for the year ..... Surplus.				1,853	11	7

69. SEEGOOR AND SATTIMUNGALUM.—*Operations.*—Sandalwood felled and stored 10761 maunds, valued at Rupees 28,548-13-6.

70. *Sandal plantation.*—The Sandalwood plantations are thriving pretty well, but the growth is slow.

71. *Sales.*—Sandalwood to the value of Rupees 25,161-8 has been sold to merchants, and there has been a small amount realized for Vengay sold on license.

72. *Confiscations.*—There have been none.

73. *Financial results.*

Expenditure.	RS.	A.	P.	RS.	A.	P.
Establishment	1,721	5	0			
Working charges	7,961	14	0			
Total expenditure				9,683	3	0
Receipts.						
Sale of Sandalwood, &c	26,499	14	4			
Value of timber supplied to D. P. W	14	0	0			
				26,513	14	4
Balance in favour of forest				16,830	11	4
Value of timber on hand 31st March 1867	37,173	3	5			
Deduct value on 30th April 1866	33,785	13	11			
Add surplus stock of timber				3,387	5	6
Financial results for 1866-67 ..... Surplus.				20,218	0	10

74. BHOWANI—*Operations*—4373½ maunds of Sandalwood valued at Rupees 16,453-1-0 have been felled and stored during the year.

75. *Sales.*—Rupees 15,000 have been realized by the sale of sandalwood to merchants.

Seignorage, realized by the sale of timber on license, amounts to Rupees 1,291-8-8.

76. *Roads.*—The Burghoor ghaut is being put into repair, and Rupees 5,000 have been paid towards it by the Forest Department.

77. *Financial results.*

Expenditure.	Rs.	A.	P.	Rs.	A.	P.
Establishment and Office contingency.....	2,042	11	7			
Working charges	4,600	0	0			
Total expenditure	.....			6,642	11	7
Receipts.						
Sale of sandalwood, &c.....	.....			16,291	8	8
Balance in favour of forests.....	.....			9,648	13	1
Value of timber on hand 31st March 1867.....	1,453	1	0			
Deduct do. 30th April 1866.....	6,000	0	0			
Deduct deficiency in stock of timber.....	.....			4,546	15	0
Financial results, 1866-67..... Surplus.	.....			5,101	14	1

78. COLLEGAL.—*Operations.*—1988 maunds of sandalwood have been felled during the year.

79. *Sales.*—Rupees 16,215-9-4 have been realized by sandalwood sold to merchants, and a very small amount by jungle timbers on seginorage.

80. *Confiscations.*—These only amount to Rupees 25.

81. *Financial results.*

Expenditure.	Rs.	A.	P.	Rs.	A.	P.
Establishment and Office contingency.....	2,230	4	9			
Working charges.....	5,500	0	0			
Total expenditure.....	.....			7,730	4	9
Receipts.						
Sale of sandalwood, &c.....	16,849	11	6			
Timber supplied to D. P. W.....	16	14	0			
Total receipts	. ...			16,866	9	6
Balance in favour of forests....	.....			9,136	4	9
Timber on hand 31st March 1867.....	3,644	12	0			
Deduct timber on hand 30th April 1866.....	4,550	9	4			
Deduct deficiency in stock of timber.....	.....			905	13	4
Financial results for 1866-67.....	.....			8,230	7	5

82. NILGIRIS—*Devi shola.*—Government gave up their claim to the remainder of the wood in this shola, upon Mr. Money's agreeing to stock five thousand bandy-loads by the road-side (of dimensions that could be put upon carts) continuously during the next two years; this is at the rate of about forty-eight bandy loads per week. This wood is all required for the Lawrence Asylum works, and the Engineer's Department is removing it as fast as it is ready. Major Morgan reports that he cannot get Mr. Money or his agents to act up to the agreement, and that but little

wood is stacked. The case has been laid before the Collector of Coimbatore, who was appointed arbiter between the Forest Department and Mr. Money.

83. *Green wood for Public Works Department.*—As the Lawrence Asylum works require a large amount of green wood, this is now being felled from the northern horn of the Devi shola (Government forest). A road has been made into this forest, and the trees are marked by Major Morgan and only thinned out, so that the forest will not be destroyed.

84. *Confiscations.*—Much clandestine felling is carried on near Ootacamund, and the punishment given, as mentioned in the last Annual Report, is quite insufficient to check it.

85. *Plantations.*—The growth of the plantations is very rapid In the Eucalyptus (or building timber) plantation, 7,051 trees have been put out, 3,520 saplings have been mossed and are ready for planting out, and 1,350 saplings are in the beds ; the remainder of the ground has been trenched or pitted and will all be planted before the end of next monsoon In the Governor's shola (firewood plantation), 12,400 Acacia trees have been planted out, 22,220 saplings have been mossed and are ready for planting out, and there are 12,400 acacias and 10,571 Eucalypti in the nursery beds.

86. *Revenue.*—There is a balance of Rupees 179-13-0 against this range; the cause of the deficit is, that very much forest land has lately been taken up by private individuals for planting, and the timber is of course all thrown into the market. This will probably be the case for the next two years.

87. *Financial results.*

	Rs.	A.	P.	Rs.	A.	P.
Expenditure.						
Establishment and Office contingencies.....	1,870	8	0			
Working charges.....	2,630	0	0			
Total expenditure.....	.....			4,500	8	0
Receipts.						
Value of timber sold to D. P. W.....	1,677	10	0			
Sales do to Public...	2,643	1	0			
				4,320	11	0
Balance against the forests...	.....			179	13	0

88. AUSTRALIAN PLANTATIONS.—*Operations.*—The Australian plantations show a very rapid growth, and the new portion do Overseer Newman great credit. With good fences and careful transplanting, there is not a single plant now lost, all the seedings are put (when two or three months old) into small bamboo-pots, a large hole is made in the joint of the bamboo (which forms the bottom of the pot) and a large piece of moss is placed over the hole. When the plants are required for transplanting, a stick is inserted into the hole and the moss soil, and plant are pushed out altogether. No injury occurs to the roots by this plan, and it is quite as good as mossing. The bamboo pots cost Rupees 1-4-0 per hundred and each can be used about six times before they become unserviceable ; it is intended to adopt this plan in some of the plantations in the plains where bamboos are available, as it is far preferable to ordinary pots or basket. A flat piece of wood or a piece of tow or coir can be substituted for moss. 16,100 trees have been put out during the year and 14,000 are ready in bamboo pots.

89. . *Sales.*—There has been scarcely any sale for timber from the plantations or from the sholas, this is owing to the large amount of timber just now available from coffee clearings This supply will be exhausted in about two years.

90. *The Forest of the Coonoor slopes.*—It was proposed to place the forests on the eastern slopes of the Nilgiris under conservancy with a small extra establishment under Overseer Newman. This plan has received the sanction of Government (vide G. O. No. 535, dated 4th March 1867) and

only awaits that of the Supreme Government. There is a considerable amount of Vengay (*Pterocarpus*), Toon or kal kilinge (*Cedrela Toona*), and Kilinge (*Acrocarpus*) in these forests, and the new ghaut being opened, the demand will be greater and conservancy has become necessary.

91. *Financial results.*

	Rs	A.	P.	Rs	A.	P.
Expenditure.						
Establishment	440	0	0			
Working charges	1,200	0	0			
Total expenditure				1,640	0	0
Receipts						
Sale of Timber, &c				513	12	0
Balance against the Plantations				1,126	4	0

92. SALEM.—*Departmental operations.*—The Sandalwood is all worked by the department, and the forests of the Denkencottah taluq have now been brought under departmental working, the rest of the district is under the License and Voucher System.

In the Denkencottah Range 2,178¼ maunds of sandalwood billets and 479 maunds of roots have been prepared and stored. 2,050 maunds of billets, 539¾ maunds of roots, and 27 maunds of chips have been sold; the former realizing four rupees per maund of 28 lbs. and the latter two rupees. The sandalwood tracts in this range require rest, and no felling will take place next year. 7,691¾ cubic feet of Acha have been felled and stored.

In the Tripatore Range 1,843 maunds of Sandalwood have been felled and stored. 1,085¼ maunds of billets were sold at four rupees per maund, and fifteen maunds of chips at two rupees per maund. There is two or three years' supply of ripe trees still available.

In the Salem Range 164½ maunds of Sandalwood were felled in the Kollaymallays and stored in the Salem Depôt; 281 maunds were sold at Rs. 3-8-0 per maund. Most of the sandalwood trees on the Kollaymallays are on puttah land, so by late orders of Government they will belong to the ryots.

93. *Seignorage operations.*—The following timber, firewood and bamboos, have been brought out of the forests during the year on payment of seignorage:—

Timber, 3,068 bandy-loads and 2,426 head loads.

Firewood and Charcoal, 6,034 bandy-loads and 14,565 head loads.

Bamboos, 3,081 bandy-loads and 27,646 head loads.

94. *Confiscations.*—Rupees 804-3-11 have been realized by the sale of confiscated timber against Rupees 1,286 last year.

95. *Forest theft and depredations.*—The Deputy Conservator reports that much illicit felling is carried on, and that lakhs of young trees are felled by cattle drivers. Many cases were detected in the Salem Range, but the parties were never punished by the Magistrate, at least beyond the confiscation of what they were attempting to steal. In the Denkencottah and Tripatore Ranges convictions were obtained, but the sentences were reversed by the Sessions Court at Salem. A separate report on this subject has been forwarded to Government by the Officiating Conservator

96. *Plantations.*—A few acres of ground near Mullapooram were sown with Babul (*Acacia Arabica*), but owing to the utter failure of the monsoon last year, the experiment did not succeed: it will be repeated this year.

A small piece of land has been prepared on the Shevaroys for a plantation of Toon (*Cedrela Toona*), called chittagongwood in the district. The tree grows well and is of large size in the mountainous tracts of this range.

97. *Locomotive fuel.*—The felling of firewood for the Railway Company has received much attention from the Deputy Conservator; no felling is now allowed, except in tracts especially marked off for the purpose.

98. *Fenced-in firewood reserves.*—Government have sanctioned the fencing in of tracts of firewood jungle, so that all cattle and fire can be effectually excluded. These tracts will be kept as locomotive fuel reserves. One large tract in the Ahtoor jungles, near the Shevaroy Hill station, has been fenced in and completed.

99. *Conservancy.*—Attention has been paid to the clearing away of creepers and destructive under-growth, especially in the sandalwood tracts

100. *Elephants.*—Two or three elephants will be necessary for the working of the Acha forests in the Denkencottah Range; it is very difficult to purchase these animals at present at anything like a reasonable rate, so it is proposed to apply for the services of a few from the Commissariat establishment (at Hunsoor).

101. *Roads.*—Rupees 6,000 from the Forest Budget were sanctioned for the repair of the road between Auchitty and Denkencottah. This road, though one of general use, will be of great service to the Forest Department; the work has been commenced by the Department Public Works, but on such an expensive scale, that it could never be carried out for anything near the amount sanctioned; a separate report has been forwarded to Government on this subject. Two short branch roads will be necessary for the successful working of the Acha forest, namely, one from Pennagara to the banks of the Cauvery, and the other from Pennagara to Muttoor, the cost will be about Rupees 10,000 for the two. A separate report has been forwarded on this subject, and sanction has been applied for.

102. *Explorations.*—The Deputy Conservator explored a tract of the Cauvery forests in the south-west corner of the Denkencottah District, and which was hitherto but little known, his report forms Appendix C, he was prevented from completing the exploration of the Javadi and Yellaghirry Hills, but this will be done at an early date.

103. *Sandalwood tracts nearly exhausted.*—There is but little ripe sandalwood now left on Government land in this district, and almost all the tracts will require some years' rest. Until very lately all sandalwood was considered Government property, and ryots never attempted to claim any growing on their puttah land, and never felled it without permission. The tree delights to spring up in the hedge-rows of the fields, so there is always a good quantity on puttah land, although it has in no case ever been planted by the ryots. In their Order No. 966 of the 10th of May 1865, Government abrogated any claim to sandalwood on puttah lands, apparently under the impression that it must have been planted originally by the land-holders. The Deputy Conservator reports that this Order leads to an endless amount of theft from the Government tracts proper; to obviate this, it might be ruled that all sandalwood on puttahs must be sold by the Puttah-holders to the Forest Department.

104. *Financial results.*

Expenditure.	Rs.	A.	P.	Rs.	A.	P.
Establishment	11,556	4	0			
Working charges	7,960	8	7			
Total expenditure				19,516	12	7
Receipts.						
Sale of Timber and Sandalwood from Depôts	15,261	1	2			
Sale to Government Departments	54	0	0			
Confiscations	804	3	11			
Seignorage, &c.	41,399	8	3			

	Rs.	A.	P.	Rs.	A.	P.
Total receipts.....	.....			57,518	13	4
Balance in favour of forest..	.....			38,002	0	9
Timber in Depôt on 31st March 1867.....	8,756	5	6			
Deduct timber in Depôt on 30th April 1866...	5,745	4	6			
Add surplus stock of Timber.....	... .			3,011	1	0
Financial results for 1866-67.....	....			41,013	1	9

105. SOUTH CANARA.—*Mr. Cadell appointed Deputy Conservator.*—Mr. Thompson, the Assistant Conservator, died suddenly from Heart-disease, and Mr. Cadell was appointed on probation He assumed charge of the district on the 20th December.

106. *Operations.*

Timber felled	...	1,226	logs of Jungle timber.
Do.	...	174	do. Blackwood.
Do.	...	1	do. Teak.
Do.	...	46	do. Augelli.
Do.	...	2	do. Kiral bogi.
Do.	...	39,400	Bamboos.
Timber floated to Coast Depôts		453	logs of Jungle timber.
Do. do.	...	111	do. Blackwood.
Do. do.	...	355	do. Teak.
Do. do.	...	1	do. Jack.
Do. do.	...	168	do. Angelli.
Do. do.	...	1,400	Bamboos.
Timber carted to Coast Depôts.		159	logs of Jungle wood
Do. do.	...	2	Kiral bogi.
Timber supplied to D. P. W...		340½	candies, Rupees 2,297-11-8.
Timber sold by auction realized Rs. 8,654-14-0	...	142	logs of Teak.
Do.	...	3	do. Kiral bogi.
Do.	...	154	do. Augelli.
Do.	...	5	do. Blackwood.
Do.	...	364	Jungle wood.

107. *Forest chart.*—The Deputy Conservator has drawn up a chart of the district, indicating all the chief forests and the timbers found in each, the rivers used for floating operations, and the depôts of the department, &c.

108. *Purchase of cattle.*—Twelve powerful buffaloes were purchased during the year, and are being used with great advantage. Elephants are very much required for this district and their purchase has been sanctioned, but none are procurable at present at a reasonable price.

109. *Plantations.*—The teak plantations at Porepa, in the Cassergode range, show a very fair growth; 28,000 plants were put out during the year.

110. *Extended operations.*—It is proposed greatly to extend the operations in this district. The ghaut forests and the forests at the foot of the ghauts, especially in the southern part of the district, contain most valuable timbers and are almost inexhaustible, and there can be little doubt that this district is able to yield a large and certain revenue, as its resources are second to no range in the Presidency. Bombay will always be a certain market and our coast depôts and extended operations will be certain to create a demand, and timber might at any time be sent up to Bombay in Pattimars. Many of the timbers of this district are as yet but little known, and some quite unknown commercially. A very fine species of ebony (apparently a new species of Diospyros, figured and described in this Report) is most abundant and of large size, and there are several species of Sâl only lately discovered.

111. *Revenue.*—The profit for the year has been Rupees 4,336-13-6, and there is a surplus in the stock of timber of Rupees 16,967-6-1. Timber to the value of Rupees 1,256 was sold to the D P. W. at auction but not yet paid for, and Blackwood to the value of Rupees 4,250-4-0, not yet paid for, was delivered at the Coast Depôts for the Bombay Gun Carriage Manufactory.

112. *Financial result.*

Expenditure.	Rs.	A.	P.	Rs.	A.	P.
Establishment and Office contingencies	6,836	12	11			
Working charges.....	12,750	0	0			
Total.....				19,586	12	11
Receipts.....				23,923	10	5
Balance in favour of Forests...				4,336	13	6
Timber on hand 31st March 1867.....	48,624	4	0			
Deduct value on hand 30th April 1866.....	31,656	13	11			
Add surplus stock of timber.....				16,967	6	1
Financial result for 1866-67.....				21,304	3	7

113. Wynaad.—*Operations.*—As there is a large stock of timber at present in the market, it was not considered advisable to fell much, and the chief operations have been carting out the timber already felled and stored in the forest depôts. The new Peria ghaut will soon open a market with the Western Coast, and until then operations will be very limited in these forests.

114. *Demarcation.*—The demarcation of these forests commenced in October, and the Officiating Conservator twice personally inspected operations; the work was closed in March, owing to the very unhealthy state of the forests. Constant sickness very much retarded the work. The whole of the forest round the Pulpilly Temple lands, and four miles westward to four miles eastward of Sultan's Battery, has been demarcated. Rupees 1,644 were sanctioned, and out of this only Rupees 496-8-3 were expended. It is hoped that the demarcation will be concluded during this year, and the estimated expenditure will not be exceeded. The Deputy Conservator is engaged upon a report and chart of the forests, which will be sent in when the demarcation is finished.

115. *Financial result.*

Expenditure.	Rs.	A.	P.	Rs.	A.	P.
Establishment and Office contingencies.....	7,336	7	8			
Temporary establishment for demarcating . ..	247	11	4			
Working charges.....	9,456	6	10			
Total expenditure.....				17,038	9	10
Receipts.						
Sale of Timber.....	10,073	10	9			
Do. to D. P. W.....	1,351	11	0			
Total receipts.....				11,425	5	9
Balance against the Forest.....				5,613	4	1
Value of Timber on hand 31st March 1867....	46,368	8	3			
Deduct value on hand 30th April 1866.....	41,052	4	9			
Deduct surplus stock in timber.....				5,316	3	6
Deficit for the year.....				297	0	7

116. Nellumbur.—*Operations*

1,20,000 saplings have been planted out in 120 acres.
200 acres pruned.
3,200 acres weeded.

100 acres of ground prepared for planting.
1,000 logs of different timbers felled.
1,800 logs dragged to river bank and got ready for rafting.
16,000 saplings felled in thinning.
6,000 bamboos felled.

117. *Commissariat elephants.*—Several of these animals have been employed in the plantations with very great advantage.

118. *Health of establishment.*—This year has been a most feverish one, and the establishment has constantly been in a disorganized state therefrom.

119. *Growth of saplings.*—The growth of the plantations is most satisfactory; in the oldest plantation (now twenty-three years of age) there are some trees upwards of five feet in girth and eighty to ninety feet in height. Numerous trees are over four feet in girth.

120. *Destructive parasite.*—A destructive parasite (a species of *Loranthus*) has made its appearance in some of the plantations; it is feared it may be detrimental to the healthy growth of the trees; everything will be done to prevent it spreading.

121. *Revenue.*—There is a profit this year of Rupees 14,757-15-11, but as there is a deficiency in stock of timber on hand at the close of the year against that on the 30th of April 1866 of Rupees 6,419-12-7 the real surplus for the year is Rupees 8,338-3-4, which is very favourable, and more than covers the deficit against the plantations last year, which amounted to Rupees 3,452-2-9, and was caused by the department not being able to sell timber which has been disposed of this year.

122. *Financial result.*

	Rs.	A.	P.	Rs.	A.	P.
Expenditure.						
Establishment and Office contingencies.....	5,004	9	6			
Working charges.....	7,243	12	2			
Total expenditure.....	.....			12,248	5	8
Receipts.						
Sale of saplings and timber, &c.....	24,223	9	11			
Timber and saplings supplied to D. P. W....	2,782	11	8			
				27,006	5	7
Balance in favour of Forests.....	.....			14,757	15	11
Balance of Timber in Depôt on 30th April 1866.	49,896	12	3			
Balance of Timber 31st March 1867.....	43,476	15	8			
Deduct deficiency in stock of timber.....	.....			6,419	12	7
Financial result for 1866-67.....	.....			8,338	3	4

123. *Bamboo seignorage re-imposed.*—At the commencement of last official year Government removed the seignorage upon bamboos; besides causing great loss in revenue, it was soon apparent that the article would be extirpated in localities where it was most required and was not over-abundant, it was cut largely for firewood and charcoal, and was exported in immense quantities from Salem and other districts into Mysore. Government have, during this year, re-imposed the seignorage. Collectors of districts were almost unanimous in recommending that there should be a seignorage upon the article.

124. *Advance system stopped.*—Government in their Order No. 2798 of the 15th of October 1866, put a stop to the system of giving advances to Contractors and others working in the forests. This caused almost a total cessation of operations in some districts for the time being, and increased rates have now to be given in consequence. The Officiating Conservator is not prepared to state how the system will eventually answer; it takes much trouble and responsibility off the hands of the Executive Officers in charge of ranges, but as long as planters and others working in the vicinity of the forest establishments continue to give large advances, it is clear that the Forest Department must pay considerably more for work done without any advance, far more in the end

than the amount of any losses that might occur under the advance system. There have been losses under this head in the Anamallays, but they have been caused by the reckless manner in which advances have been given; with care and attention on the side of the Executive Officer there should be little or no loss.

125. *Specimens of timber sent to Europe.*—Large slabs and cross-sections of all the most valuable timbers were forwarded from the different forest districts to the Paris Exhibition Committee; after they have been exhibited in Paris, they are to be deposited in the India Museum in London.

126. *Grazing dues, forest products, &c.*—Collections under these heads should form part of forest revenue. In former paragraphs of this report it will be seen what immense damage is done in many forests by cattle drivers and others. The grazing dues of the Nallay Mallays, a reserved forest, are sold annually by the Collector, and the receipts credited to land revenue; the forest establishment, however, has to keep a constant watch to stop depredation and fires. If the grazing was under the department, and the cattle drivers had to conform to the forest rules, conservancy would be much easier. Forest products are in all cases collected by the Hill tribes, and the poorer classes residing at the foot of the hills or outskirts of the forests, and all Forest Officers in charge of districts agree in stating that these people are cheated in every possible way by the petty traders and others to whom they sell the produce, and that they would much prefer a regular market, such as the forest department might establish. A plan of this sort would tend greatly to the development of the resources of the forests, and many products, at present little known and never collected, might be brought into commercial use. Collectors of districts could see that Forest Officers exercise no undue influence, and the fact of the Hill tribes and Jungle races being in a manner under the control of the Forest Department, would be of very great advantage to conservancy. All the fires on the Anamallays are caused by the petty traders who come up from the plains to barter with the Kaders for cardamoms, ginger, turmeric, and other hill produce. The Kaders are cheated to any extent by these people, and are always made out to be in their debt. The Officiating Conservator has already addressed the Board of Revenue on this subject, and Dr. Cleghorn intends to lay it before Government. If strict conservancy is ever to be introduced into the reserved forests of the Presidency, some plan similar to what is now proposed must be adopted.

127. *Herbarium.*—The Herbarium attached to the office of the department was transferred during the year to the Museum. The Officiating Conservator has collected largely for it during his tours.

128. *Botanical drawings.*—Appendix A is a list of new and rare plants drawn in the office of the Conservator during the year.

129. *South Canara ebony and Red cedar.*—Drawings and descriptions of the ebony of South Canara and the Red cedar tree (*Soymida febrifuga*), are given in Appendix B.

130. *Botanical publications.*—The ferns of British India have reached to the fifteenth number; they will be concluded in three more numbers; the plates for these last are being drawn at Kew, from specimens chiefly unique.

131. *Financial result for the year.*

	Rs.	A.	P.
Net profit for the year.....	1,21,458	0	0
Deduct difference in value of Timber on hand on 31st March 1867, from the amount on 30th of April 1866.....	11,127	0	0
Financial result for 1866-67.....	1,10,331	0	0

I have the honour to be,

Sir,

Your most obedient servant,

R. H. BEDDOME, CAPTAIN,
Officiating Conservator of Forests.

APPENDIX A

List of new and rare Plants drawn in the Office of the Conservator of Forests in, 1866 67

ANONACEÆ

Polyalthia vaticoides, (Bedd), Anamallays

SABIACEÆ

Sabia, sp , Palghaut Hills

MYRISTICACEÆ

Myristica, new sp ? male and female, South Canara } Two large Nutmeg trees
Do do do do }

MELIACEÆ

Amoora, sp , a tree, Anamallays
Do *Lawii*, Concan
Soymida febrifuga, (Juss), Kurnool

CELASTRACHÆ

Glyptopetalum grandiflorum, (Bedd), Wynaad

LEGUMINOSÆ

Ormosia, new sp , a large tree, South Canara and Tinnevelly

RUBIACEÆ

Hedyotis trinervia, (Rom and Sch), Tinnevelly
Pæderia fœtida, (L), Bengal

EBENACEÆ

Diospyros, sp., male and female, Brumagherries
Do new sp , male only, South Canara
Do *assimilis*, male and female, S. Canara *The Ebony of that District*
Do *sylvatica* ? (Roxb), male and female, South Canara
Do *cordifolia*, (Roxb), male only, Kurnool
Do *ovalifolia*, (Wight) male and female, Anamallays
Do *embryopteris*, (Prsl), male and female, South Canara
Diospyros chloroxylon, (Roxb), Kurnool
Do new sp , male and female, Sisparah
Do *Wightiana*, D C , Kurnool
Do *insignis*, (Thw) male only, Anamallays.
Do *lanceifolia*, (Roxb), male only, Bengal
Do *quæsita*, (Thw), male only, } Ceylon.
Do *Gardneri*, (Thw), do
Do *crumentata*, (Thw) male and female,
Do *affinis*, (Thw) male & female,
Do new species, male only, large tree, Anamallays

APOCYNACEÆ.

Echites, sp , South Canara

VERBENACEÆ

Premna ? Mudumallay
Do. new species, Wynaad

ACANTHACEÆ

Strobilanthes sexennis, Nees, Nilgiris
Do *caudatus*, (T Andn), South Canara and Coorg
Do *parviflorus*, new species, S Canara
Lepidagathis Goensis, (Dalzell,) South Canara
Barleria Beddomii, (T Andn), Singhur
Asystasia nemorum, (Nees), Anamallays
Calophanes Dalzellii, (T Andn), Concan

EUPHORBIACEÆ

Hemicyclia, new sp , a large tree, Wynaad

URTICACEÆ

Hyrtanandra triandra, (Miq), Anamallays

ORCHIDACEÆ.

Cypripedium Druri, new species, Travancore

APPENDIX B

Description and Plates of the South Canara Ebony and the Red Cedar tree.

Diospyros assimilis (Bedd) A large tree, dioecious leaves glabrous (turning very black in drying) shining, short petioled, alternate, oblong with a blunt acumination, 5-7 inches long 2 to 2½ inches broad, male flowers generally in threes on very short peduncles, calyx funnel-shaped, 4 cleft, stamens 8 each, bearing 4 to 6 anthers, no rudiment of an ovary, hermaphrodite, flowers solitary, calyx much larger than that of the male, deeply 4-cleft with a callous, elevated 4-lobed marginal ring round its mouth, stamens about 13 single, style 1, stigma 4 cleft, ovary 8-celled—Plate I

This is the ebony of South Canara, where it is called *kara mara*, and is abundant in the moist forests (or sholas) in the plains, and about the foot of the Ghauts, its wood is intensely black, the tree is nearly allied to the *Dyospyros ebenum* which grows in the hill tracts of Cuddapah and Kurnool, and has much the general appearance of that species , the stamens are, however, very different in both the male and female flowers.

Soymida febrifuga. (Juss.) A large tree, leaves abruptly pinnate, leaflets opposite, 3-5 pairs oval, oblong, obtuse, panicles : large terminal or in the axils of the upper leaves, flowers small, sepals 5-imbricate, petals 5-patent, stamen tube cup-shaped, thickened into 10 lobes, which are 2-toothed at the apex with an anther between the teeth, ovary 5-celled, ovules 12 in each cell, stigma 5-angled, fruit capsular, oblongo-obovate 5-celled—Plate II.

This is the Red Cedar, it grows in the forests of Goomsur (where it is called *Sohau*), in the Cuddapah and Kurnool forests, the forests about Palghaut, Travancore, and some other tracts it is called *Soomi* in Telugu, and *Shem* or *Soar kulli* in Tamil. The Bengal name is *Rohun*; it yields a very hard, dull red-coloured wood, which is one of the most durable in our Presidency.

APPENDIX C.

Report on the forests of Oorygum, Tagutty and Billykul, in the Denkencottah Talook.

I have the honour to submit a report on these forests mentioned in my Progress Report for August 1866.

2. They are situated in the south-west corner of the Denkencottah forest range, Salem District, and extend from the Cauvery river about twenty-five miles in a northerly direction to "Jaulgherry," varying in breadth from eight or ten miles at the northern extremity to fully twenty at the most southerly point, where they extend along the north bank of the Cauvery, from the Mysore frontier on the west to the old Pennagra and Auchitty road on the east.

3. The Mysore frontier forms the western boundary throughout, and the general aspect of the country is identical with that part of the Mysore territory, of which it doubtless at one time formed part.

4. These tracts, or rather the greater part of them, have not been previously visited by any of our department; indeed, many of the inhabitants of Billykul and the more southerly villages and hills had never seen a European, none having visited that part at least for many years. This short report will therefore, I trust, be of interest, as well as useful to the department.

5. On leaving "Gopachundrum," where we have a Sandalwood Depôt, the road runs almost due south through the village of Jaulgherry (one mile distant), whence it gradually ascends and runs along a ridge (varying in height from 3,200 to 3,500 feet above the sea) by the hamlets of Nundimungalum, Nunchigaira and Shoolay Goonta, whence a steep and rocky path descends to Poolalum or Baelalum, about eight miles distant (by the road) from Gopachundrum. Here I encamped.

6. Sandalwood is found in some quantity around Nundimungalum, which is a fine village surrounded by cultivation, but all ripe trees have been felled; no other timber of value was seen on this day's march. The next morning I proceeded to Hooly Bunday (Tiger Rock) three miles distant and about one mile north of the village of that name, which is well situated amidst extensive cultivation. Sandalwood was found here in considerable quantity. Thence the road descends rapidly for about five hundred feet down an old stone track (unrideable) and runs along the brow of the hill almost due south for two miles, when it descends gradually to Tagutty, which is situated in a valley seemingly open at both ends, *i. e.* towards Mysore on the west and Auchitty on the east. The road for the last three miles is rideable throughout. No timber of value, except as noted above, was observed; but around Tagutty, Satinwood *(Chloroxylon Swietenia)* and Karungali *(Acacia Sundra)* of fair dimensions and in considerable quantity, and a few Atcha trees *(Harduickia binata)* were found. Tagutty is distant about eight miles (by road) from Poolalum.

7. On the following morning I proceeded over a spur of the Hill known as "Narrainsawmy Mullay," which is ascended by an old stone path, steep, but rideable, to Oorygum, a large village situated in a plain surrounded on all sides by hills, and thence up an exceedingly steep and unrideable stone path to the village of Billykul, situated near the summit of the hill of the same name, and

containing about fifty houses. The inhabitants of this and the surrounding hill villages are mostly Hindoos of the "Sevachami caste." A large tract near the top of the hill is under cultivation, and the climate seems very favourable for the growth of raggy, wheat, &c. The highest point of the hill is fully 3,500 feet above the sea.

8. On the Narrainsawmy Mullay, Satinwood, Karungali and Atcha wood are found in some quantity. My camp remained at Billykul for five days, during which I inspected the adjacent forests and jungles, and obtained information regarding the surrounding country.

9. My Overseer, Mr. Mahomed Ally, was engaged, meanwhile, in ascertaining the exact spots on which a number of Sandal trees, said to have been felled on Ryot's puttah-lands had stood, which resulted in the discovery that fully one-half had been felled on Government land.

10. This has been already fully reported on, and I have repeatedly pointed out the evils which result from the working of the G. O. No. 966, dated 10th May 1865. Not only is it impossible to keep a check such as would enable us to say how many trees are on puttah, and how many on Government land, but the evil is increased by the inhabitants of these remote parts constantly cultivating land in excess of that for which they pay Government kist, an evil which would seem unavoidable.

11. Most of the sandalwood trees are thus found on puttah-lands, which have been either originally acquired in this way or actually given up on puttah without any reservation of the sandalwood, such not being necessary until the issue of the Order above quoted, as sandalwood was invariably considered a Royalty and was never felled by ryots without permission. It has in *no case* been sown, or planted by the ryots or their forefathers, as the belief is general amongst natives (and I am inclined to agree with them), that the seed does not germinate, or rarely comes to maturity, unless originally deposited by birds. Neither does the present rule benefit the ryots, who are, as a rule, *swindled* out of the wood by some clever merchant, as in this case they only get one anna for every ripe tree, which is less than we should have paid them for felling and preparing it.

12. I trust that this matter may be again brought before Government for reconsideration, as, with the present rule, I foresee that this valuable tree will soon cease to exist, at least in a ripe state throughout the Government forests in this district, and the revenue be thus materially lessened.

13. I trust that the above remarks will not be considered out of place in this report, when it is remembered that my primary object in visiting these tracts was to ascertain the quantity of sandalwood available for a future supply; the other tracts in this range being, for the present, exhausted, and requiring rest for ten years at least.

14. I am sorry to report that the prospect of supply from these tracts is small, as the extent of the forests where I found the wood is limited; where it does grow, it is plentiful, and of good quality. I counted twenty-five trees to the right and left of a small path in a distance not exceeding half a mile in length, which represents a large quantity per square mile, to which extent, however, the patches rarely attain in these parts.

15. It is worthy of note that on the "Billykul" hill, all the sandalwood trees are found on the northern slopes, *i. e.* those which have a northerly exposure, on the south side with an identical soil, &c. not one tree is to be found. I am not aware whether this peculiarity of the tree has been observed before, or any reason adduced for it. The tree *invariably* grows in patches, but I have not before, or since, met with such a marked preference for one particular exposure as I observed on the several peaks of this hill.

16. A great proportion of trees have not yet arrived at maturity. All ripe trees having apparently been felled before the department commenced working, as of course the contractor found it to his interest to fell all he could.

17. I gave a contract for felling and trimming one thousand maunds, half of which has been completed; but the contractors find difficulty even now in obtaining ripe wood, and my orders to them and the sandalwood peons are imperative, not to fell any tree which has not arrived at full size. A good deal of wood can be got from hedge-rows, and should the Government not think fit to alter or modify the rule mentioned above, I propose purchasing this from the ryots, and so endeavour to save that growing in Government forests from being appropriated.

18. We must, however, be prepared to discontinue all sandalwood sales after 1868, for many years.

19. This will give our establishment time to superintend the working of the timber tracts of these forests, under the close system, which is now being introduced; and with regard to the supply of timber available, I am happy to report most favourably.

20. Descending the hill (Billykul) into the valleys which lead to the Cauvery river, distant about six miles, *Teak* is found here and there, but stunted and commonly from stump shoots Atcha (*Hardwickia binata*) and Dinduga, are found everywhere in large quantities. This timber can be dragged by the several ravines (particularly by a path leading past the village of Bailpully) to the river with comparative ease, and thence floated to Mudderputty (below this falls prevent further floating).

21. When the road is made from Pennagra I should therefore recommend the old route by that village, and we can make a branch track to the Mootoor Atcha forests. If Rs. 4,000 or 5,000 are placed at disposal for this part of the road (Pennagra to Mudderputty) during the year, it would be passable for carts before the end of the year, and we could in the meantime fell, square, and float the timber to Wudderputty.

22. As regards the extent and value of these forests as a source of timber supply, no doubt need be entertained. A ten years' supply of first class timber is here available without damage to the forests.

23. On leaving Billykul I returned to Oorygum and Tagutty, in which places I found that the conservancy rules were little known or observed. I explained to the Kumdars the wishes of Government on the subject, and pointed out the objects in view, whilst I particularly impressed on them and the people generally, that no curtailment of their rights, as ryots, was intended or would be allowed, and that any complaint on the subject should be carefully investigated. I have since furnished the Kumdars with copies of the rules in Telugu, and a supply of licences and tickets, with instructions for distribution to parties wishing reserved timber, &c. Their accounts are submitted monthly to the Overseer in charge of the range, and the collections forwarded direct to the Taluq Treasury. The revenue has thus been augmented, and the interests of conservancy furthered

24. From Oorygum I proceeded viâ "Oohanee," where numbers of fine satin and neem trees were found to Auchitty, and thence to the forests, and sandalwood tracts on Cotagherry, Munchay, and Mailgherry hills, a memorandum on which I shall submit hereafter.

25. I have delayed submitting this report, being desirous of illustrating it by a chart of the forests which I have prepared, and from which the localities, &c. could be clearly seen. I shall endeavour to submit the chart complete for the Denkencottah Range, with my report on the other tracts, mentioned above, when I trust it may be found useful for reference and as a guide to future Forest Officers and Overseers.

I have the honour to be, &c.

CAMPBELL WALKER, Lieutenant,
Deputy Conservator of Forests

APPENDIX D.

RUSSELCONDAH, 29*th April* 1867.

From

MR. T. G. FREEMAN MACCALLY,
Overseer of Forests, Gumsoor.

I beg to forward my Annual Report and Accounts for the official year 1866-67.

2. During the year, I have visited the forests of Sootunghy, Soobadah, Bamanapadro, Kookloobah, Moojaguddah and Sooradah, with the view of examining the Sâl trees of large dimensions, which have been specially reserved for Government purposes, leaving portions of these forests to be worked on the Voucher and License System, and I have also apportioned off unpromising trees of the unreserved kinds for the purpose of re-building the houses of ryots, which will be well suited for their requirements. In the Sooradah forest I have, with the permission of the Collector, brought under strict conservancy about six miles of the forest between Kaliagoodah and Coparagundah, forming a semi-circle round the range of hills which bound Sooradah in a north-easterly direction. This patch of forest, containing thousands of young Sâl trees of promising appearance, of two to three feet in girth and about fifty to sixty feet in height, with other woods of the reserved and unreserved kinds, I have strictly reserved from being felled by the public, in the hope that these trees may come to perfection and produce large timber.

3. In the Moojaguddah forests, to the south of the road, I have stopped all felling, to allow that portion rest for a time.

4. The houses of two hundred ryots, which were burnt during the year, have been re-built of unreserved woods, on the written permit of the Forest Department free of seignorage, in accordance with paragraph 10 of the Revised Forest Rules quoted below.

"Ryots are allowed to cut the unreserved kinds of timber free of charge for agricultural "purposes and for the bonâ fide erection of their houses, but if they require the reserved kinds of "timber, they must pay the fixed seignorage."

5. The ryot has not only his own and family's dwelling to care for, but also that of his cattle which has a wooden floor and his grain house, so that he has, from one to four or five houses, or more, according to circumstances, to re-build when they are burnt down. The burning of houses and their re-construction is of annual occurrence in this district.

6. Seignorage was levied on ryots for building purposes until the revision of paragraph 10 in July 1865, which freed them from charge on unreserved wood for their buildings. The re-erection of four hundred houses, which had been burnt in 1866-67, free of seignorage, the prevalence of famine throughout the district and the small demand for timber beyond that of the Department of Public Works, occasioned a falling off in revenue for 1866-67.

7. The Executive Engineer of the district has been supplied with timber by this Department for the Jail buildings at Berhampore and for the Bugivanuddy bridge near Aska.

8. Four Sâl logs of great dimensions, namely, 24 feet in length by 1 foot square, with 32 piles of 25 to 27 feet length and 1 foot diameter at upper end, were removed from the forests of Bamanapadro and Subada with great difficulty, there being no roads in the forests, and the cattle and carts engaged being inadequate in strength for the purposes required, in addition to other obstacles connected with the removal of timber from a close wooded forest. If a few timber carriages or trucks with strong buffaloes could be attached to this department, it would greatly facilitate the removal of large timber. Elephants are the best animals for dragging timber out of forests but are very expensive. The Forest Department, at present, is entirely dependent on the carts and cattle of ryots, who are not disposed to allow them for timber of larger dimensions than 18 feet and 1 foot square; some of these having sustained loss by the breaking down of their carts and injury to their cattle while engaged in the transit of timber.

Thirty of these large piles were floated from this place to Arka, but only twenty reached their destination, one raft with 10 logs having been wrecked on the way during the freshes of October. Seven of the missing logs, were recovered near a village called Dharjeemundaly.

Seventy-two large logs of Sâl (unworked up) of dimensions 18 to 19 feet in length and 4 to 5 feet in girth, were floated down on twelve rafts in October from the Kookloobah forest, but there being no floods during the N. E. monsoons in this district which were daily expected, the timber could not proceed more than three miles from insufficiency of water. When the monsoons set in this year, I hope to have this timber floated down to Nowgaum whence, if possible, it will be brought to the Russelcondah Depôt.

Twenty specimens of wood were sent in August to the Central office, Madras, for the Paris Exhibition.

In the month of February I proceeded to Madras on duty, and took with me fifty Sâl plants in baskets; of these, only thirty were delivered, the remainder having died from the earthen tubes in which they were packed breaking by the accidental upsetting of the baskets during transit.

The health of the establishment has not been good; of 10 peons, one died from dysentery and five have had repeated attacks of fever, and I myself did not escape, having been seriously prostrated while in Kookloobah forest supervising the preparation of the timber rafts there: and sometime elapsed before my recovery at Russelcondah.

The five foreign plants, namely, *Acacia Melanoxylon*, *Australian gum* trees alluded to in last report, as being reared in my office compound, died on being transplanted. I would be glad to try the experiment of sowing in the forest if I could get a small supply of seed.

In conclusion, I subjoin an abstract statement shewing the financial results for the year, which I hope will be satisfactory. The Cash remitted to the Treasury is Rupees 8,321-9-2, seignorage and valuation vouchers of D. P. W. for 1865-66 (brought to account) and that of 1866-67 Rupees 2,735-2-1, makes a total of Rupees 11,056-11-3 from which deduct Rupees 2,992-12-4 on account of conservancy and working establishment, leaves a balance in favour of Government of Rupees 8,663-14-11, exclusive of timber on hand on the 31st March 1867, valued at Rupees 1,403-4-0.

Financial Results, See page 2, paragraph 7.

I have the honour to be, &c.,

T. G. FREEMAN MacCALLY,
Overseer of Forests, Gumsoor.

APPENDIX E.

From

Mr H. H. YARDE,
Assistant Conservator of Forests.

Sir,—I have the honour to subjoin the Annual Report of the Forests of Cuddapah for the official year 1866-67.

2. Owing to the severe test the District had to undergo last year, the collections as expected have not reached the estimate orginally submitted by me, however, on the whole, I may call them satisfactory. Owing to droughts, merchants could not induce their work people to fell excepting in the low jungles where firewood for the Railway has been cut to some extent Several blocks of firewood jungle have been marked off by me for the cutting of Railway fuel, and the necessary check is kept by the peons; but as the system was not secure from smuggling, I have instituted another mode of working which is about the best check, that can be introduced in a district where fuel is of such consequence. The Locomotive Agent of the Railway Company advises me when he accepts tenders for the supply of fuel, and the parties are then granted authority

for felling in such jungles as I define. The agent pays into the Cuddapah Treasury the seignorage at the rate of annas 6 per Bandy, either monthly or quarterly, when measuring the fuel stacks and paying the Contractors; thus giving them no chance of smuggling, while our department gets benefit from the system.

3. My attention was directed to a portion of the Nulla Mallai slopes in the taluq of Badvel; where numerous teak saplings exist; few of them are of good scantling but they are generally suitable for small house beams, posts &c. The felling is restricted to the department, but as the carriage from Badvel to Cuddapah, and Codoor Depôt would be immense, and would not pay, the tracts are consequently reserved.

4. I have in vain looked for Redwood of good scantling, I suppose we must set it down therefore to exhaustion of all the ripe trees by invaders of former years. I detected about 20 bandies of this timber near to Rolamadagoo and Balrazpully, and from the preparations that had been made it was intended probably to wait for the freshes before conveying it to Nellore. I visited next the jungles of Balrazpully and saw considerable damage done to Red sanders saplings by cowherds, being without assistance I could not apprehend any of the offenders, but addressed the Collector, by whom I believe strict rules have been circulated.

5. *Quantity of timber felled and stored.*—As there was timber enough in Depôt to supply the assumed requirements of private indiviuals and Public Departments, I added only 2,000 cubic feet, all of which has been stored.

6. *Collection in seignorage on Bamboos, timber, &c.*—The subjoned list exactly shews what has been removed during the year from the forests under Licences and amount realized under sales.

Description.	Rs.	A.	P.
Timber..	22,164	7	0
Bamboos.	136	7	0
Firewood.	1,006	6	0
Charcoal.	105	14	0
Sale of confiscated timber.	430	8	0
Sale of Depôt timber to D. P. W..	1,472	14	0
Seignorage on timber, &c., from D. P. W.	55	8	0
Sale of Depôt timber to private individuals.	504	12	8
Total Rupees..	25,876	12	8

7. *Confiscated timber.*—About 153 carts of timber of the reserved kinds, and a large quantity of junglewood was sold, the prices at auction exceeded their market value realizing the amount of Rupees 861, of which Rupees 430-8 was paid to informers.

8. *Sale of timber from Depôt.*—403 cubic feet were taken by merchants of Bellary Cuddapah, Trivellore, and Conjeveram, amounting in the aggregate to Rupees 504-12-8. The Public Works Department indented only for 134½ cubic feet for the erection of the Pullampett Cutcherry, amounting to Rupees 168-2 for which a voucher is attached to the accounts. The value of 1082 cubic feet Rupees 1,804-12 not having been introduced in the accounts of 1865-66, has been credited to this year's accounts, the voucher of the D. P. W. Officer being attached to the Returns.

9. *Seignorage for amount of timber taken by D. P. W.*—The Range Officers of the D. P. W. having requested permission to fell timber and bamboos for their Department, permission was accordingly given. I am unable to set down the amount of cubic feet each cart of timber contained, but an average may be assumed of about 24 cubic feet to a bandy. The seignorage not being forwarded to the Treasury as in the cases of private felling, a voucher for the amount is accepted.

10. *Red Sanders Plantation.*—The casualties of last year were replaced by 2,000 plants from the nursery. A trial of a few teak seeds was made, but owing to the heat and unfitness of the soil I have only been able to preserve 5 teak plants by removal to another piece of ground.

The plantation of Red sanders was visited by the Collector in company with Major Michael, and the vigour of the plants, their size, &c. forced comment. During the season, planting, transplanting, weeding, clearing, &c. was prosecuted, but as it is hard to meet with gardeners in this district I am obliged to be as lenient as circumstances admit, to induce them to serve us, but withal there are a few run aways. I should wish to devote more time to this plantation; but it is difficult, as I have to look over the whole district without an Overseer.

11. *Destruction to forests.*—I will not only include the damage done to the forests under this head by cowherds but by fires, which I believe to be caused not so much by friction, as by ryots setting fire to the grass, either to produce fresh forage for their cattle or to protect themselves from the surprises of wild animals. Reddies have a general warning that they are responsible for the fires occurring near their boundaries, but it has little effect in suppressing it. As regards the destruction by cowherds, I have already mentioned that it was brought to the notice of the Collector, and the instructions that Officer has issued in the district through Tahsildars, will I hope not give me ground for notice in next year's Journal.

12. *Health of establishment.*—My Duffadars and Peons have all suffered severely from fever and I have shared to some extent, the district being more sickly than any of the previous years. Balpilly has been unusually feverish and it was hard to get a peon to stop there 3 or 4 days together, so I had to entrust the checking of Licences to an old peon a resident of that place. Dhoor has also been feverish. Two peons died and others were prostrated.

13. *Treatment of causes of theft.*—Several parties being detected in smuggling timber, were prosecuted under the Conservancy Rules; the cases being well substantiated, the parties were imprisoned from one to two months with fines of from Rupees 100 to Rupees 150 each case, and others with simple imprisonment only.

Financial Results, see page 3 paragraph 19.

I have the honour to be, &c.,

(Signed) H. H. YARDE,
Assistant Conservator of Forests.

APPENDIX F.

From

MR. T. SHEFFIELD,
Assistant Conservator of Kurnool Forests.

SIR,—I have the honour to submit my report on the forests of this district for the year, 1866-67.

Introductory Remarks.—As was anticipated, there is a large falling off of revenue this year, owing to the famine in the Bellary District, and the great distress and sickness in this and the surrounding districts. The merchants of Bellary, Guntoor and Nellore, mainly supply themselves with timber from our forests, and for the first three years of working these forests, we, on an average received, half our revenue from the above districts; but this year we have taken hardly anything from them.

Another drawback has been the stoppage of the Madras Irrigation Company's works. This Company, when in full work, used a large quantity of timber, and the Company's contractors and work people built themselves good substantial houses from their savings; but when the Company stopped work, all their people knocked off also, and we have, in consequence, suffered a loss

of revenue; but I believe it will be only temporary, for the Company is again at work. The people of the district are busily earning money; the famine in the Bellary and other districts relieved, and there has been a good harvest. Looking at these favourable circumstances, I am in hope of taking a fair amount of revenue during the current year, and as the Irrigation Canal and the Railway progress, we may confidently calculate on a continuance of a good yearly revenue without over-working the forests. During the three previous years in which the forests have not been worked, as much as they could afford, our actual money-profit has been very large, having taken Rupees 1,10,440 and expended Rupees 17,993, which leaves a clear money profit of Rupees 92,454, and I think we may consider them as fair average years. The forests were not over-worked and the timber was not forced into the market; we must therefore consider the year under review as an exceptionally bad one for forest work and not one to base our future calculations on.

Protection of Forests.—Conservancy is our chief duty, but at the same time the most difficult and delicate task to carry out effectually, without a Forest law. However, I have done all I can to prevent fires in the forests and with partial success. During the last two years there have not been so many fires as formerly, owing to the forest peons strictly watching the forests during the dry season; but still a great deal of damage is done yearly, and I do not think we can ever put a stop to it entirely.

Upwards of 6,000 large creepers have been cleared from around forest trees at a cost of Rupees 36 in paid labour, and by making the peons carry axes when going into the forest and cutting all creepers they see. In the low-land, I have marked out blocks of forest in which to burn charcoal; formerly people manufactured it wherever they liked, to the injury of the forest and annoyance of the establishment. This, though a simple matter, is a great step towards conservancy, for we have many iron forges in our district and a great quantity of charcoal is consumed, and I found that while the people were allowed to manufacture where they chose, they destroyed all the best parts of the forest, preferring Teak, Billoo (Satinwood) and other hard woods to the common and softer kinds; but now we can check any waste of materials, and strictly prevent the felling of the reserved kinds. The people complain, and I think with fair cause, of the annoyance of being obliged to procure a ticket for every cavadie load of charcoal burnt, and of having to get that ticket passed by the village Reddies; if they fail to do this, their charcoal is liable to confiscation and themselves to punishment.

Iron Forges.—Most of the Iron workers have forges established in the heart of the forests for part of each year, twenty to thirty miles away from their villages; and to comply with the rules, they have to travel that distance to procure a one anna ticket. In these cases I have been obliged to issue a ticket for forty-eight cavadie loads (Rupees 3) which they say is about a month's supply. I have no doubt that this is far short of a month's consumption, but as I have no means of collecting the seignorage by the load in the forest, it is better to take their estimate than to lose all. Many of these people requested me to compound with them for a yearly sum, and their request was submitted to the Collector, but the Board of Revenue declined to alter the existing mode of collection. I solicit it may be again proposed. The people would prefer it, and would, I think, willingly pay Rupees 3 per month while at work, or Rupees 2 per month during the whole of the year. From personal observation, I estimate the consumption of each forge, working throughout the year, at Rupees 125, while the Deputy Collector's estimate, made by the order of the Collector, is Rupees 50 each forge per year, so that my present proposal is only half the lowest estimate and about the sum we now receive from each forge.

Quantity of timber felled and stored.—There being little demand for timber this year, for the reasons shewn above, I thought it advisable to reduce the working expenditure as much as possible. I therefore felled only 1,046 cubic feet; of this quantity, 249 cubic feet have been brought to depôt, and 796 cubic feet remain in the forest. The latter timber is of large scantling, cut expressly for the Public Works Department by order of the late Major Flint; but could not be moved by the bullocks or buffaloes, and no elephants suitable could be procured from the Military Department, Bellary, but now that two strong elephants have been purchased for these forests, we shall be able to remove beams of any size, and here I beg leave to remark that the timber we can now bring out is well suited for large buildings, such as the military buildings at Bellary.

Forest cattle.—We have two pairs of bullocks and one pair of buffaloes; these have been employed in bringing confiscated timber from small outlying villages to large central ones for sale.

Timber removed under Licences.—The subjoined list shews the quantity of timber, firewood, bamboos and charcoal taken from these forests on licences during the year, also the quantity of firewood and wood for agricultural purposes, taken free.

List shewing the quantity of Timber, &c., taken from the Forests on Licenses during the year 1866-67.

Description of Timber.	Bandy loads.	Head loads.
Reserved Timber, at Rupees 3 per bandy load	4,904	....
Do. do. 2 do.	33	....
Jungle wood do. 1 do.	4,786	....
Firewood, at 4 Annas per bandy load..	833	....
Bamboos, at 5 do. do.	2,840	5,068
Charcoal, at 1 Anna per cavadie load...	....	12,372
Firewood, taken free by Ryots	1,900	....
Agricultural wood, taken free by Ryots	2,239	....
Total number of loads..	17,535	17,440

Confiscated timber.—Four hundred beams and posts of different kinds, besides a large quantity of small wood, have been confiscated and sold during the year; the whole realized Rupees 2,982-13-3. Of this, Rupees 1,792-13-3 have been credited to Government, and Rupees 1,190 have been paid, or is now in the taluqs for payment to informers. I am glad to report a steady yearly decrease from this source of revenue.

Timber sold from Government depôts.—Only 444 cubic feet of timber has been sold from the depôt this year. We have now in depôt 1,947 cubic feet of well seasoned timber. Of this amount, 1,151 cubic feet, valued at Rupees 1-4 per foot, is in depôt at Nundial, and 796 cubic feet, valued at one Rupee per foot, in the forest.

Timber supplied to Public Departments.—The Public Works Department have taken only six bandy loads of timber during the year, for which vouchers to the value of Rupees 18 are attached to the accounts.

Plantations.—There is not much to record under this head, for the district is peculiarly unsuited for the profitable growth of timber, although I am glad to report that an effort has been made, and I trust with success, and although not likely to prove directly profitable, will, I doubt not, be of great benefit to the district, and if carried out on a more extended scale, will in time make our roads shady and cool. I allude here to the plantation opened and the avenues planted by me in Kurnool for the Collector with your sanction.

Since starting the plantation last year I have not seen it, as my duty does not often take me to Kurnool, but I believe the whole of the 6½ acres planted, are doing well. It is a pity more is not to be done this year, for firewood is becoming very scarce on the Yerra Mallais, but for some reason, I believe because there is no public land available near Kurnool, no enlargement of the plantation is to take place next season.

Avenues.—The trees I planted along the roadside at Kurnool are doing remarkably well so far, but I am afraid they will never attain any size, as there is a bed of solid blue slate not more than two or three feet from the surface throughout the whole of Kurnool, and in most instances the slate had to be moved in forming pits for the plants.

Nursery.—At the Collector's request I opened a small nursery at Nundial to grow plants for avenues. It now contains, ready for planting out during the rains, some thousands of seedlings including Tamarind, Mango, Neem, Casuarina, (*Inga dulcis*), and several other kinds; these will be given to the Tahsildars as they are required. This nursery, as well as the plantation and avenues,

are kept up at the cost of the jungle conservancy fund, and merely superintended by me in my spare moments.

Cinchona experiment.—On the 4th September 1866, I received a case containing 56 Cinchona plants for trial on the Nalla Mallais. On opening the case, two plants were found dead and sixteen plants in a sickly state, but I planted out all the live ones in a piece of ground previously prepared close to the Yerra Chelma hill, at an elevation of about 3,000 feet. The spot is as moist a one as can be found on the hills, and the soil deep and rich with a north-east exposure. A month after planting out, I found the sickly ones dead or dying, and six others not looking well. I gave orders to the gardeners for their care, but when I again visited the spot with you in December they were dead, the remaining thirty-two plants were doing well. I visited the nursery again last month and found the plants alive, but doing indifferently, some appeared to be drooping, the leaves in a flagging state and suffering from the heat. I am afraid they will not stand this hot dry season, for they are small, and the roots have not yet penetrated to any depth. There is great difficulty about their care. I cannot get a gardener to live in the forest alone, and the coolies I do get, know nothing of gardening and are constantly running away, either frightened by the wild animals or through catching fever. Had I a plantation large enough to give employment to half a dozen hands I should find no difficulty on this score, for they would not be afraid, and in sickness could help each other. I could get gardeners, and the plants would at least have a fair trial. They have not had one in the present instance, and if they all die I should put down the failure as much to want of proper care as to the climate.

As soon as the hot weather is over I will report the condition of the plants. Should you please to send up more plants or seeds of the Cinchonas, they shall have my utmost care, and from my having studied their treatment under Mr. McIvor, while I was under Major Morgan's orders, I may lay claim to a slight knowledge of the subject.

Teak.—I have 974 teak plants in the nursery ready to plant out in the rains, and one acre of ground is cleared and pitted to receive them. The plants are now from one to two feet in height. There are also about 2,000 Australian Acacias, six inches high, in the nursery.

Forest products.—Although there are many productions of the forest, from which revenue might be derived, yet we receive nothing from any of them; this would not matter very much if the people got them free—but they do not. Dues are collected on grass and on fruit, but not credited to forest revenue; now these two articles may, I think, fairly be considered legitimate items of forest revenue. It is the Forest Department who watch and protect the forest; and who suffer when fires lighted by Poolary farmers and others destroy the forests; in fact, they are debited with the cost, and, I respectfully submit, should be credited with the proceeds.

The Poolary contract is sold for 3 or 4,000 Rupees yearly, the whole of the land farmed is in the forests and forms part and parcel of the Nalla Mallais, which are wholly guarded by the Forest Department. I believe, but am not positive, that this part of the forest formerly belonged to the late Captain Nelson, and that he used to rent the grazing; but it is now rented to natives by the Revenue Department and the amount credited to the general revenues of the district. The north of the forest is the only part rented, the other parts not being so much frequented; but by this road (the Muntural Cunnama) the Brinjaries bring salt from the Eastern Coast, and thousands of bullocks are consequently passing to and fro, and they sometimes do considerable damage to the young trees in the forest; and the Brinjaries, by firing the grass, destroy many hundreds of plants yearly. I solicit this amount may be credited to our forests, to enable us in some measure to restore the damage done.

The other article "fruit," is not of much consequence, as most of it is derived from avenue trees, although I think that that portion of it taken from our forests might be credited to forest revenue.

Trespass.—As every person is allowed free access to all parts of the forests, there is no trespassing, but there is plenty of damage done by firing the grass; thousands of young plants are destroyed and large trees more or less damaged by it, but there appears to be no stopping it. We

can never catch any person in the act, although nearly all the fires originate in this manner. A few may be caused by the friction of dry bamboos, but very rarely.

Criminal prosecutions.—I have prosecuted a great many persons during the year for stealing wood from the forest. In some cases I have not learnt the result, but some have been punished by fines varying from one to ten Rupees, others to imprisonment for short periods, and in one instance to flogging. A Reddy and a Curnum of a village have been sentenced to six months imprisonment each for conniving at the removal of stolen timber from their village while under confiscation.

Health of establishment.—The past season has been very sickly, and the forest establishment has suffered equally with the remainder of the people. We first suffered from cholera, the Overseer and I being attacked, and also three of my family, one of whom died. Since that time we have all, without exception, suffered from fever, one peon died, three took their discharge, and seven are now suffering but not so severely as to keep them from duty. I used all the fever mixture sent from Madras, and also some quinine kindly given by T. A. N. Chase, Esq., the Collector. I should be glad of a supply of quinine, as it appears to do more good than the fever mixtures.

Financial Results, vide page 5 paragraph 32.

I have the honour to be, &c.,

THOS. SHEFFIELD,

Assistant Conservator of Forests.

APPENDIX G.

CAMP CUDDAPAH, 13*th April*, 1867.

From

MR. H. H. YARDE,

Assistant Conservator of Forests.

SIR,—I have the honour to subjoin my Annual Report of the forests of North Arcot, for the year 1866-67.

1. I travelled over nearly the whole taluqs of this district, but having been attacked with fever, was obliged to return, and have not since had an opportunity of completing the tour. The jungles are very straggling in their nature, and it is only in inaccessible places that large trees are to be met with.

2. I have stopped felling in some tracts, and have pointed out blocks where felling of timber may be carried on, but bamboos are the chief material of export from the forests, and I have left it to the discretion of the Overseer to select places.

3. The hills in the Vellore and Polur taluqs being, for the most part, inhabited by the Mullialum tribe, great facilities could be found in conserving the forests, but it involves much time and trouble to induce the tribe to serve us, and it requires the co-operation of the Collector of the district to get the assistance in suppressing smuggling. Cultivation is largely carried on in these hills by them, and I have ascertained that no tax is levied on the ground they clear, though the tribe pay a small sum on ploughs and yokes. I am not in favour of this at all, as the Mullialum villager is at liberty to fell as much jungle as he likes, and deserts it for a piece more in accordance with his wishes, from time to time. The tribe may be induced sometimes to fell bamboos, &c. but this is only when free from field work.

4. My Overseer was taken from me in September and sent to the Anamallays, Mr. Thistlethwaite being appointed in his place. I was glad of Mr. Brougham's return in November, as having a knowledge of the district, his services were valuable to me in the management of the forests. There is one thing to be said, and I hope it may meet your consideration, as the matter concerns the regular working of the establishment. The jungles of Thellay and Arsambett only

in the Vellore Taluq are under our management; these hills being so mixed up with the limits under district conservancy, that we are unable to regulate felling, and to reserve tracts with discrimination; setting this apart, what timber can be smuggled from these hills, is generally protected by a Monigar's permit, and passed into the market or other places. The bulk of timber coming from the jungles, included in the limits of district conservancy, is nothing more than saplings. There appears to be no check on the permits, as I found many of them undocketed, and it is probable that use is made of the same several times. I mention this with but one view, and that is, to show that timber growing in these parts is indiscriminately felled, and without due care of the capabilities of the jungles.

5. In February last I met with large quantities of the Capilla-puddee (*Rottlera tinctoria*) being gathered for merchants, as the powder is valuable in the market as a dye, and fetches a high price. I hope you will obtain the permission of Government for a tax on it, or the powder to be departmentally gathered and thrown into the market. The Kadakai (*Terminalia chebula*) is also largely gathered, and as any one can gather these hill products, why not Government?

6. The Chendragherry limits also join a portion of forest under district conservancy, large logs of Thumba, Jalari, &c. are permitted to be cut on licences issued by Monigars as well as redwood, but as the limits join the Cuddapah hills, it is difficult to ascertain where the timber is got.

7. *Timber sold and quantity stored.*—Other markets being in the district, there has therefore been few applications to our depôt for timber. I have, in consequence, not stored more than was felled in 1865.

Out of the balance of timber remaining on hand at the close of the official year 1865-66, namely, 507 cubic feet, 9 inches, value Rupees 704-3-4 in the year under review, was sold to private individuals; 10 cubic feet and 5 inches, value Rupees 15-10, leaving a balance in stock of 497 cubic foot and 4 inches, value Rupees 688-9-4.

8. *Amount collected in fees on timber, &c.*—I have put this into a form of statment as it will exhibit the collections on each head and will show the collections of each talook.

Talooks.	Timber.			Bamboos.			Firewood.			Charcoal.			Sale of confiscated Timber.			Sale of Depôt Timber.			Total.		
Chendragherry...	616	0	0	178	0	0	205	0	0	14	0	0	165	1	0	..	..	..	1,178	1	0
Vellore.....	172	0	0	232	11	0	214	11	0	12	7	0	33	7	1	15	10	0	681	12	1
Polur.....	384	10	0	214	0	0	251	6	0	15	0	0	18	10	4	..	..	..	883	10	4
	1,172	10	0	624	11	0	671	1	0	41	7	0	217	2	5	15	10	0	....	..	..
																		Total Rupees..	2,743	7	5

9. *Destruction to forests.*—Shepherds in this district are much in the habit of cutting down saplings for their goats, but the practice has been considerably checked, since the late Sub Collector was made acquainted with the fact; the fires, as usual, carrying destruction with them. The circumstance was mentioned to the above officer and the Tasildars were ordered to hold Monigars of villages responsible for such occurrences.

10. *Confiscated timber.*—No auctions were held during the year in consequence of the timber I had to sell in the Cuddapah District. The amount shewn in the statement in paragraph 8 of this report, is what was unadjusted in the accounts of 1865-66.

11. *Prosecutions.*—Parties during the year found secreting or smuggling timber were prosecuted, some at the offices of the Town Sub Magistrate, Vellore, others at the offices of the Tahsildars, and two at the office of the Deputy Magistrate of Naggary—the prisoners in these

cases were all punished; of the two tried at Naggary, one was sentenced to three months imprisonment with a fine of Rupees 300, the other to imprisonment of two months.

12. *Health of establishment.*—The Overseer suffered slightly from fever, but more frequently since his return from the Annamallais. The peons have all had attacks, but were not prevented from attending to their duties.

Financial results, vide page 6, paragraph 35.

I have the honour to be, &c.

H. H. YARDE,

Assistant Conservator of Forests.

APPENDIX II.

SOUTH ARCOT.

From

LIEUTENANT C. J. WALKER,

Deputy Conservator of Forests.

SIR,—I have the honour to submit the Annual Administration Report of these forests for the past year.

1. I have continued in charge throughout the year. The Overseer, Mr. Lloyd, was promoted on 1st August to the charge of Bolamputty forests, Coimbatore District, and I appointed Mr. P. Rungiah Naidoo, who had been for two years Writer in the Salem Forest Office, on probation. He has proved zealous and regular in the discharge of his duties. I have therefore confirmed him in the post from the 1st instant, and have no doubt he will continue to give satisfaction. A Forest Office and Store have been built at Chengamah, which was much required, as the Overseer formerly had no place in which to transact business or keep records.

2. Every means have been adopted for the preservation of the forests and to prevent indiscriminate felling of the reserved timbers. Great difficulty is still experienced in inducing License-holders to have their licenses checked at the tannah stations, and given up when the timber is brought. Licenses were retained for months in remote parts, and doubtless much timber was felled thereon in excess of the quantity paid for; our small establishment in this district being utterly unable to put a stop to this system. I brought the matter strongly before the Head Assistant Collector, Mr. Hughesden, who, in November, summoned some of the princial offenders and punished them after enquiry. The timber tracts on the Terumallay have been visited and steps taken to preserve the teak saplings, &c. found there. I have transferred another peon temporarily from the Salem establishment to Chengamah, and have opened a tannah station there. The peon assists in the Overseer's Office as Gomastah and deserves some small increase to his pay on that account. I would suggest that in future the establishment of South Arcot be shewn separate from that of Salem, and the pay drawn from the South Arcot Treasury. The pay of the Overseer is now alone debited to the South Arcot forests, the duffadar and peons having been originally transferred from Salem Range as an experiment. This plan of drawing pay from two different Treasuries creates confusion and delay, and it has been proved that the forests are well able to support a small establishment. I think it right that they should be debited with the cost of the same. It now swells the Salem disbursements on this head, which, from the nature of the forests of that district, are themselves considerable.

The South Arcot establishment must, however, continue to be regarded as mainly preventive, and no large surplus in excess of the working charges can be expected.

3. No timber has been felled by the department during the past year.

4. No working establishment is kept up—the peons are employed in checking licenses and preventing the felling of under-sized timber, the forests being worked entirely on the Voucher and License system.

5. I annex a statement, A, shewing the quantity of timber, firewood, bamboos, charcoal, &c. removed from the forests on license and ticket during the year. The demand was greatest during the months of May, June, July and August, the want, which then prevailed, having driven many ryots to earn a livelihood for a time by felling and removing timber, &c. Great damage was done at this time to the young trees and bamboo jungles by cattle drivers, who felled them in order to feed their cattle on the young leaves. Detection in such cases is extremely difficult.

6. The number, &c. of confiscated logs sold by auction is shewn in statement B. They were, for the most part, clandestinely felled or brought on licenses which had long expired, and which it was natural to suppose had been already used.

7, 8, 9. No timber felled by the Department has been sold during the year or supplied to Public Departments. The small item of twelve annas shewn as outstanding, remains unadjusted on account of delay in the receipt of a voucher.

10. The want of rain in the early part of the year, and the change in superintendence, prevented planting operations. A small tract on the Terumallay has been selected, where it is proposed to sow teak as an experiment during the current year.

11. No further information regarding forest products has been collected during the year. They are now (excepting the bark of the *Acacia leucophlea*) collected free of seignorage.

12. In several instances, parties causing damage to the forests, and felling without license, have been apprehended and brought to trial, and in every case prompt conviction and punishment followed adequate proof. Illegal felling (except by stealth) is consequently much less frequent here than in the adjoining forests of Salem, where a diversity of opinion regarding the law affords the means of escape to many well-known offenders. I have received every assistance from the Collector and Revenue Authorities generally.

13. The health of the establishment has been uniformly good.

14. No new plants or trees have been discovered.

15. Operations have been limited, no departmental working having been carried on. I am convinced of the advisability, wherever practicable, of the department working the forests on the close system as distinguished from the system of voucher and license, which leaves openings for many abuses. If the Conservator approves, I propose felling and bringing to Chengamah a few bandy-loads of timber of the best descriptions, as an experiment, and exposing them to public auction; we could thus ascertain if the working would answer financially, and, if so, continue it. There is no doubt that we are thus better able to conserve the forests and regulate the felling according to the supply available.

16. The financial results are exhibited in page 7, paragraph 41, and show a net increase of profit over last year of Rupees 171-7-7, which is favourable, the receipts being for eleven months only.

A.

STATEMENT shewing the quantity and description of Timber, &c. removed from the South Arcot Forests on License or Ticket, during the year 1866-67.

FOREST RANGE.	BANDY LOADS.								HEAD LOADS.					
	Timber.			Firewood, Bamboos, &c.				Total of Bandy loads.	Timber.		Bamboos, &c.			Total of Head loads.
	1st Class.	2nd Class.	3rd Class. unreserved.	Bamboos.	Bark.	Firewood.	Charcoal.		Junglewood.	Karangalli & Satinwood.	Bamboos.	Bark.	Charcoal.	
South Arcot.....	322	366	338	107	31	369	0	1,533	218	98	1,166	0	2,237	3,719
Total of each description	322	366	338	107	31	369	0	1,533	218	98	1,166	0	2,237	3,719

B.

ABSTRACT of the Statement of Timber, &c. confiscated and sold during the year 1866-67.

DESCRIPTION.	Number of Bandy Loads.	Number of Head Loads.	Amount realized.			Amount credited.			Amount distributed as rewards.		
			Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Atcha, Vengay, and Karangalli	7¼	0	39	5	0	36	5	6	2	15	6
Kutsooroonjee, Parambai, Vemboo, and Naga Maram.	8¼	0	48	7	0	43	8	0	4	15	0
Jungle and Firewood	6¾	1	10	6	0	7	3	9	3	2	3
Bamboos	8	1	33	10	0	19	11	9	13	14	3
Bark	1	1	2	4	0	2	4	0	0	0	0
Charcoal	0	12	0	14	0	0	12	0	0	2	0
Total.....	31¾	15	134	14	0	109	13	0	25	1	0

CAMPBELL WALKER, Lieutenant,
Deputy Conservator of Forests.

16*th April* 1867.

APPENDIX I.

MADURA AND TINNEVELLY.

From

MR. T. N. TURNBULL,
Sub-Assistant Conservator of Forests.

SIR,—I have the honour to submit my Annual Report for the official year 1866-67, on the forests in the district of Madura and Tinnevelly; the latter having come under my supervision in July last, agreeably to Government Order, No. 1033, dated 2nd May 1866.

2. I have continued in charge of the Madura forest range, during the year under review, with the addition of that portion of the Tinnevelly forests handed over to this Department, thus increasing the total length of my range from 75 to 125 miles.

3. Our operations of "forest work," namely, cutting creepers, &c. have been effectually carried out. There being no charges under this head, it is necessary to mention that all work of this nature has been done by the permanent establishment, and has had invariably my close supervision.

4. The system of marking all the reserved timber trees before they are permitted to be felled by license holders has gained for itself unpopularity with the merchants of this district. I have no hesitation in saying that, under the license system, it is the only safeguard to strict conservancy, and the protection of forests generally, but the merchants oppose it, as it interferes with their economical management; for they heretofore fixed on localities where there are clumps of trees in one place, to facilitate felling, dragging, &c., whereas now, under this system, their axe-men are scattered, the distance and difficulty of carriage increased, and their labours attended with much inconvenience. This has driven some merchants to seek their requirements from the adjoining zemindary forests, which has tended to a considerable falling off in our seignorage collections for the year. I would suggest in order to obviate these difficulties, that the merchants be permitted to choose their own trees for felling, and that the department exercise the duty of measuring at the tannah station all unworked timber and render confiscation imperative in such cases where the timber brought out is under three feet in circumference. This will insure the felling of full-grown trees, maintain conservancy, and perhaps be better appreciated by merchants than the present system.

5. From the accompaniments to this report, it will be observed that 4,497¼ cubic feet of timber, valued at Rupees 3,239 have been felled, and added to our stock in depôt. It is necessary

to note that we have had to pay, for some time past, 12 annas per cubic foot; a corresponding increase of course has been made to the selling price, which is now Rupees 1-4 per foot, thus realizing a clear profit of eight annas on each foot sold, which I trust will be deemed sufficiently satisfactory to guarantee the extension of operations.

6. The total amount of seignorage collections for the year has been Rupees 4,267-7-0. In last year's summary, I noticed that it would be desirable to afford facilities to merchants in obtaining licenses, and I am anxious to extend as much as possible this system; so that we can place within the reach of all, means for paying into the Treasury all sums of money, with the early distribution of licenses, on the production of vouchers. To facilitate this *modus operandi*, it will only be necessary to permit the heads of villages to receive all monies and grant vouchers, at villages distant from the Taluq Cutcherry. Merchants now experience much trouble, inconvenience, and annoyance. To explain fully, I will adduce the following. Every individual living fifteen or twenty miles from the cusbah station for a single bandy load of timber, bamboo or firewood, must go this distance and return. In some instances brought to my notice, they are detained at the Taluq Cutcherry either in consequence of the Tahsildar's absence or his being busily engaged in his magisterial or revenue duties. *Four* or *five* days perhaps elapse before this individual, who has travelled a distance of fifteen or twenty miles, obtains a voucher for his money, which may be only *one rupee* or *twelve annas* or *five annas*, as the case may be, either for a bandy load of *timber*, *bamboo* or *firewood*, according to his requirements. Heads of villages are held responsible for the collection and transmission of the land-tax to the cusbah station, why not permit them also to collect and transmit the timber tax to the Tahsildar in cases where it is absolutely necessary, as shewn above?

7. The issue of the voucher in duplicate, the original of course coming through the Tahsildar to me, will be a sufficient check.

8. We have altogether sold from depôt this year 828 cubic feet of timber, valued at Rupees 1,138-15-8, as particularized as under :—

Department of Public Works, 674 cubic feet.	Rs.	842	2 2
Private sale.....	,,	296	13 6

There is a balance of 4,243 cubic feet in stock, valued at Rupees 3,241-9-11.

9. Rupees 801-12-1 was the amount of outstanding advances at the close of last year, which has been brought forward in this year's account current. Out of the Budget allotment of Rs. 3,500 for the year, Rs. 3,477-11-6 has been drawn by cheques from the District Treasuries, making a total of Rupees 4,279-7-7 to be accounted for; out of which sum Rupees 3,329-3-0 have been expended in felling and carting timber to depôt. The balance, Rupees 950-4-7, remains unadjusted. Rupees 900 outstanding advances. Rupees 50-4-7 cash in hand. These amounts will be carried to next year's credit and there accounted for.

10. The sum of Rupees 180 was sanctioned for office contingencies for the year 1866-67, out of which sum Rupees 76-15-0 has been expended and adjusted in the Madura accounts while Rupees 39-14-0, out of Rupees 50, was expended and adjusted under the same head in the Tinnevelly accounts.

11. My opinion as to the best means of utilizing forest products will be found in last year's report. The Collector, with reference to a Despatch from the Secretary of State, requests information thereon, especially in regard to the best mode of increasing the supply from this country. My views were "that a system of monopoly undertaken by Government for purchasing all products at a fixed rate would encourage the natives to collect them. If this plan be not adopted, then it must be left to private capital and enterprize with such encouragement and facilities from Government, as will induce them to pursue the speculation with success. If the suggestion that the Forest Department should undertake the collection on Government behalf be followed, it would require an additional establishment specially devoted to this purpose, which I think is not desirable, because the advantage would hardly compensate the expenditure."

12. That the Government sustain a loss from non-interference in this matter, cannot be doubted. If all forest products were leased out annually, I am positive that the districts under my jurisdiction would bring in at the lowest possible estimate Rupees 1,200.*

Madura .. .. . Rs. 700
Tinnevelly ..... ,, 500
Rs 1,200

13. The establishment of both districts have enjoyed throughout the year good health, and I have every reason to be satisfied with the manner in which they have performed their onerous duties The Duffadars* have given security in the sum of Rupees 200 each. The appellation of Duffadar to men on the receipt of Rupees 15, and who have given security in the sum above mentioned, appears to me somewhat derogatory, and that respect which is due, is not shewn them by the Taluq officials, merely on account of their being designated Duffadars, and which places them on an equality with the head peon of a Taluq Cutcherry on the receipt of Rupees 7. The Duffadar in these districts are all respectable men, and I would urge their either being called Maistries or Sub-Overseers.

* Madura 8
Tinnevelly... 2

14. My writer has conducted the duties appertaining to the two districts with satisfaction. His work has considerably increased by the addition of the Tinnevelly forests. I have recommended an increase of Rupees 10 to his salary, to be debited to the Tinnevelly forests, which I hope will be sanctioned.

15. During frequent tours in these forests my attention was drawn to the large numbers of old Teak and Vengay stumps, and my serious consideration devoted to the best means of utilizing them. The conclusion to which I have arrived is, that these stumps, instead of being allowed to remain, should be taken up and worked into spokes for carts. You are aware that these stumps are generally three feet long, sometimes longer, and a cart spoke is seldom or ever more than two feet six inches, and as durability is the chief thing needful, I am positive it is met with in these stumps, and would be the best means of utilizing them and proving also remunerative to Government.

Tectona Grandis, Pterocarpus Marsupium.

16. In my communication, No. 126 of the 13th March 1866, I brought before you the subject of the issue of licenses by Zemindars and Mootahdars of land, and the unrestricted felling of timber in Government forests, in consequence of the boundaries not being demarcated. The matter is one of great importance, as it materially affects the well working of the Forest Department, and opens avenues to clandestine fellers, and hence it inevitably follows that only meagre crops of scattered timber are now to be found, where vast areas were once richly covered by nature with trees of gigantic growth. It may not be out of place here to allude to the felling of immature trees in Zemindary lands. This ruinous practice extends also to the removal of saplings Our attempts to check clandestine felling in our own forests are greatly frustrated by the first evil. Yet, notwithstanding the difficulties with which the department has to contend. I am happy to be able to record that, by rigidly prosecuting all detected offenders, the practice is being put down. Here I would notice the difficulty of detection, and give the following extract from my Progress Report, for November 1866:—

"I visited the forests adjacent to the village of Periacolum. I regret to state that the "revenue of this taluq is considerably falling off During my inspection, I observed that large "quantities of timber, said to be felled in the Bodinaickanoor forests, are being dragged out through "the Government forests. This practice is objectionable, as in consequence we can exercise no "check on our forests, unless we actually see the timber felled in the Zemindary lands."

"That licenses are granted, and that timber is felled in the Zemindary forests cannot be "doubted, but it being taken through the Government forests opens an avenue to clandestine "fellers, and which I have not the slightest hesitation in asserting, they avail themselves of, for "all timber brought from that direction is said to be from the Zemindary."

17. It may be said Zemindars issue licenses, and that timber brought out without such

is liable to confiscation. To meet this difficulty I make an extract from my report for 1864-65, and draw special attention to the concluding portion :—

"As these Zemindar's forests are so interwoven with ours, most strenuous efforts to pre-"vent clandestine felling are rendered abortive, while it affords timber speculators opportunities "of plundering Government forests under the protection of Zemindars pass-ports, which are easily "obtained for a trifle paid to their agents, or anybody else professing to be their agent."

Vide letter above quoted.

18. To return to the unrestricted felling of timber by Zemindars, I am of opinion that the Government have reserved to themselves the right to fell trees, &c. in Zemindary forests. My belief is, that such an immunity could not have been granted by the Government to these land-holders. A reference to the permanent title deeds would shew that the right of felling and sale of timber was not included among the *assets* on which the *Peiscush* was originally fixed under Regulation XXV of 1802. I am further of opinion that the Government made the original settlement on the cultivated and culturable extent of the Zemindaries, and therefore did not include among the assets, the right of unrestricted felling of timber, as the Government did not anticipate, in 1802, the subsequent restriction which only came into force on the organization of the Forest Department.

19. Under these circumstances, I would suggest that measures be adopted to divest the Zemindars of this supposed prescriptive right.

20. In some of the Zemindary forests there is much valuable timber. In a casual visit to the forests of Amainaikanoor Zemindary, I discovered Sandalwood trees.

21. The tax on bamboos was re-imposed in the Madura District, in the month of August, agreeably to Government Order No. 1651, dated 5th July 1866. Though its re-imposition has not done much towards increasing the revenue of the district, yet the indiscriminate felling of bamboos has been put a stop to ; but for this, we would have in all probability seen its total eradication.

22. Looking at the account current of the Madura forest, it will be observed that there are Rupees 735-8-4 against this forest at the close of the year. That there is not really a deficit, I feel it necessary to explain. The revenue under seignorage collections amounts to Rs. 4,267-7-0 as shewn in paragraph 6, the pay of Establishment Rupees 2,986-7-0, thus shewing a clear profit of Rs. 1,281 to Government.

23. Our felling operations this year, though they have *nominally* increased expenditure, have added to the *stock in hand* ; for, even estimating the value of our present stock in depôt at one rupee per cubic foot for timber felled during the year, which costs annas 12 for felling and delivery at depôt, yet had it been sold at the above rate, we would have realized Rupees 4,243 in addition to our present receipts.

24. With the transfer of the forests of the Tinnevelly District, north of Courtallum, to the Madura range, the Government in their Order No. 1742, dated 13th July 1866, sanctioned the following scale of Establishment :—

Two Duffadars at 15 Rs. each. 30
Four Peons at 6 Rs. each. 24

Total Rs... 54 *per mensem.*

I have informed you in a separate report that this establishment is found to be inadequate.

25. The seignorage collections of the Tinnevelly forests, for the nine months they have been under supervision, amounted to Rupees 2,288-11-6, while the Collector in his letter No. 482, dated 15th June 1866, states that they were only Rs. 129-2-1 when under the Collectorate, from which may be conjectured the quantity of timber that must have been yearly removed out of these forests without payment,

Financial results of Madura and Tinnevelly forests, vide page 8, paragraphs 48 and 51.

APPENDIX K.

ANNAMALLAI, BOLAMPUTTY, SHOLAKURRAY, AND CHENAT NAIR FORESTS.

From

LIEUTENANT H. M. GOSLING,
Deputy Conservator of Forests.

SIR,

I have the honour to submit the Annual Progress Report of the forests under my charge, for the year 1866-67.

2. Though in accordance with established form, I forward a Report for the whole year, I can only report upon the operations of the last five months, namely, from the date of assuming charge on the 25th October 1866.

Report confined to the operations of the past five months.

3. It was my intention to have adhered in the arrangement of subjects to the suggestion contained in the 18th paragraph of Dr. Brandis' Memorandum on the Report of the Central Provinces for 1863-64. I, however, found some of the headings not suitable, as there had been within the past year

Several headings in Dr. Brandis' Memorandum suited to this Report.

(a.) No survey, and examination of forests little known.

(b.) No demarcation of reserved Government forests. But I have availed myself of the remaining salient points suggested for Report by Dr. Brandis.

4. On assuming charge, the subjects urged on my immediate attention as requiring prompt settlement were :—

I.—The recovery of outstanding advances, amounting to Rupees 8,645-8-0.

II.—The rapid conveyance of planks to the depôt at Mungarah.

Subjects urged as requiring prompt settlement.

III.—The formation of a fuel reserve for the Madras Railway Company at Waliar.

IV.—The settlement of the claim preferred by Ramasawmy Moodeliar to the ground on which the Government Timber depôt stands at the foot of the Anamallai slip.

V.—The development of the three forests comprising the Coimbatore Belt, and the introduction into them of the Licence and Voucher System.

VI.—The most unremitting supervision of the clearance of grass and brushwood round the numerous depôts in the Anamallai forest, to prevent a recurrence of the disastrous loss from fire last year.

Stage of progress arrived at.

5. The stage of progress at which the above subjects have arrived, and the steps taken by me to effect their completion, are as follows :—

I.—After a careful consideration of the contracts and papers connected with the defaulting contractors, I selected ten reported as solvent and obtained warrants for their apprehension. These were successfully prosecuted before the Sub-Magistrate of Polachy, by Mr. Overseer Truter, whom I selected for this duty, from the acquaintance he possessed of the particulars attending the formation of these contracts. I have since prosecuted others successfully, but by this time many of them had absconded to Cochin, Wynaad, and elsewhere; entailing both trouble and the loss of money paid for their warrants. I have not however given up all hope of arresting them at a future period, and will therefore not recommend any sums to be entered under the head of profit and loss. Table A shews the result of these prosecutions and the amount still outstanding.

Result of the prosecution of the defaulting cart contractors.

II.—Up to the time I joined, there had been little or no carting carried on, the reason assigned being that since the order of Government prohibiting advances, no contractors would come forward. Another reason urged, was the delay occasionally made in settling the accounts of those who carted without advances. I removed the latter ground for complaint by personally, or through the Overseers, promptly settling with those contractors who produced vouchers from the floaters

Effect of the prohibitory orders of Government regarding advances.

at Mungarah; the more formidable difficulty, however, was to defeat the combination that appeared to have been formed to induce the Government to rescind their prohibitory order: finding this impracticable, I was compelled to recommend in letter No. 227, dated 19th November 1866, to you an application to Government for sanction of 4,000 Rupees* to form a cart establishment of our own. In an interview I had the honour of having with His Excellency the Governor at Coimbatore on the 26th November 1866, I explained the state of affairs, when His Lordship quickly perceived the necessity of the measure, and was pleased shortly after in Council to sanction it. On the receipt of the order of Government I proceeded to Palghaut and directed Mr. Overseer Lloyd to have forty carts constructed as early as possible, at the same time desiring him not to announce they were for Government. The appropriateness of the selection I made in Mr. Lloyd to superintend the construction of these carts was evinced by the despatch and *extraordinary cheapness* with which they were completed. Forty strong carts, in every way suitable to forest purposes, were built in six weeks at the low rate of Rupees 27 each, similar carts at Coimbatore would have cost Rupees 35. In the purchase of bullocks the same caution was observed, and a large number of young, strong animals were secured at the various fairs in the vicinity of Palghaut, Coimbatore and Polachy, costing on average Rupees 80 per pair. About ten pairs are required to complete the complement, and these I intend purchasing at the great annual fair held at Avenashy in May next.

* Sanction of Rs. 4,000 by Government to form a Cart establishment.

Rapidity and cheapness of construction due to Mr. Overseer Lloyd.

III.—In my letter, No. 229, dated the 20th November 1866, I addressed the Collector of Coimbatore on the subject of land available for the formation of a fuel reserve for the Madras Railway Company at Waliar. On the 29th March 1867, I received a reply stating that "with the exception of a few isolated patches, there was no land available at Waliar for a fuel reserve, owing to the greater part having been given away on improving leases" by Mr. Grant's predecessor, consequently this important matter is still in abeyance. Should it prove impracticable to come to terms with the owners of these Puttah lands, I would recommend the enclosure of a strip of land in the Chenat Nair forest, which is within two miles of the railway station at Paulghat and accessible to carts.

No land available at Waliar for a fuel reserve.

IV.—The vexatious and inexplicable claim preferred by Ramasawmy Moodelliar to the land on which the Government Timber depôt stands at the foot of the Anamallai slip was brought by me to the notice of the Collector of Coimbatore early in December 1866. In January 1867, Mr. Campbell, Assistant Collector, was despatched to Adivarum to endeavour to effect an arrangement. But the claimant whose right to the land is supported by cowlenamah, in the hopes doubtless of a pecuniary offer being made, clung with tenacity to his site, refusing all offers of exchange. The matter remains still unsettled, and in the meanwhile the Government are in the anomalous position of occupying the site on sufferance. Ramasawmy Moodelliar bought this piece of land from a person who purchased it from an Overseer in the Forest Department, who had irregularly obtained it on an improving lease without the knowledge of his superior Officer, Major Michael, from Mr. Grant's predecessor about the year 1857. It appears to be a question for legal decision whether Ramasawmy Moodelliar's claim to the land is not rendered insecure from the fact of his having purchased it indirectly from a person who, as a forest Overseer, had no right to own land in his range, and certainly not without the knowledge and permission of his superior officer. This important subject requires being brought to the notice of Government, with a view to speedy settlement.

Claim of Ramasawmy Moodelliar to the site of the Government Timber depôt at the foot of the Anamallai timber slip.

Insecure tenure of the site held by Ramasawmy Moodelliar at the foot of the Anamllai slip.

V.—The introduction of the Licence and Voucher System into the Coimbatore Belt was delayed by the Acting Collector objecting to it unless an officer was stationed at Coimbatore for the purpose of issuing licences and tickets. But Mr. Grant's return enabled me to introduce the system without further delay, and the usual tickets and licences have been

Introduction of the Licence and Voucher system.

struck off and issued to the Tahsildar of Coimbatore for distribution, and I have great hopes of obtaining a valuable revenue from this source. My predecessor, Lieutenant Foord, had felled about twenty trees of Blackwood, out of which some magnificent logs had been cut for the Madras Gun Carriage Manufactory. On my proceeding to remove these, a Parsee, named Merwanjee, unexpectedly claimed the timber, as grown on the land which he had obtained likewise from Mr. Grant's predecessor in 1862, on an improving lease. Unfortunately, the terms of the cowle namah contain no reservation to Government of the valuable timber standing on the ground; consequently, the Government have not only lost the timber, but have been put to the expense of cutting it for the benefit of a private individual.

Unexpected claimant to a portion of the Bolamputty forest.

Comment on the impropriety of thus indiscriminately giving away forest land without any reservation of the valuable timber standing on it, and at a period when Teak and Blackwood are in such urgent demand by the Bombay and Madras Gun Carriage and Marine Departments, and in disregard of the standing order of the Board of Revenue, No. 151, paragraph 4, requiring Forest Officers to be consulted prior to such grants being made, is superfluous. A different course is now pursued, and I have the satisfaction of reporting that the grant of a piece of land at the foot of the Ponachy Ghaut,* the value and extent of which had been purposely depreciated by the applicant, Ramasawmy Moodellyar, was refused on my representations by the present Collector. If this strip of forest had been alienated, not only should we have had a repetition of the annoyance now experienced at the foot of the Anamallai slip, but the same person would have had it in his power to close the only feasible approach to the recently-formed Coffee Plantations on the Upper Anamallais.

Comment superfluous.

*Forest.

Satisfactory course now pursued by Mr. Grant.

Strenuous exertions were made to prevent a recurrence of the devastation and loss occasioned by fire last year. For this purpose, parties of Mulcers were weekly employed in clearing grass and brushwood round the depôts and bridges in the forest. Tri-weekly visits were made by Mr. Overseer Truter, in company with myself, when every forest depôt was carefully inspected. This supervision was continued up to the 28th February 1867, when my presence being required elsewhere, and to prevent accidents during my absence, I set fire to the grass and relieved myself of further apprehension. It affords me satisfaction to report that no timber of any description was burnt in the forests under my charge this year. I trust next year by contracting the area (twelve miles) over which the depôts now extend, to render the work of supervising their clearance less arduous.

No timber burnt in the Anamallais this year.

6. The disposal of the enormous accumulation of timber lying in the Anamallai forests and depôts at Mungarah and Ponany, valued at upwards of three lakhs of Rupees, has occupied my serious attention.

Since the abolition of the Indian Navy, there had been no demand for our timber from Bombay. On assuming charge, I received a letter from the Port Officer at Carwar, requesting me to reserve a portion of the timber at Ponany for the Bombay Marine Department. I at once complied with his request, and forwarded to the Superintendent of Marine and Agent for Gun Carriages at Bombay, statements of the description of timber in store. The result was an application for 4,850 planks and 100 logs of Teak and 100 logs of Blackwood. Of this amount, 2,450 planks of Teak have been handed over. The Madras Gun Carriage Department has also applied for 10,000 cubic feet of Blackwood, which will be supplied in the course of this year. Appendix B shews the quantity handed over and paid for. Owing to tonnage not having arrived in time to remove the planks for the Bombay Marine, they are not entered.

Satisfactory disposal of the Anamallai timber.

7. To enable me to remove the heavier logs, I applied for sanction of Government for four limbers and elephant harness from the Arsenal, to be used with our sling carts and elephants. My application was granted in G. O. No. 902, dated 17th April 1867.

Elephant harness, sanctioned.

8. I beg to draw your attention to the following important subjects :—

I.—*The demarcation and survey* of the Government forests in both ranges, interpersed as they are with private forests, is very much needed. Indeed, this important work cannot be commenced too soon, as the calculations of revenue to be derived from them materially depend on the speedy execution of this work.

Demarcation and survey of forests, much needed.

II.—*The survey of forest tracts, little known*, especially that tract covered with much valuable Teak, Blackwood and Poonspar, lying to the south-east of the Anagoondy Pass in the Anamallais, should be at once commenced. At present the boundary line separating our portion of this forest, from that belonging to the Rajah of Cochin, is known only to one of the headmen of the wild Khader race inhabiting the Anamallais, by name Ottley. The Bombay Government having renewed their demand for the Anamallai Teak, so much valued for ship building, and the Bombay and Madras Gun Carriage Manufactories being likely to become annual customers to a large extent, it is extremely desirable that an early survey and demarcation of this tract should be made, which, with a portion of the Coimbatore Belt, is the only one whence timber of the required scantling can be obtained, and I desire to urge the importance of this survey, with a view to commencing next year operations in these forests, to provide seasonable timber in readiness to meet the wants of the above departments. The sources of supply for fifteen years were drawn from the well-stocked forest, leased from the Numbuddry; it is now needful for us, having almost exhausted it, to seek for the future supply in the other parts of the Anamallais I have pointed out, but as they are contiguous to a Native State, it is most needful that a definite boundary line be immediately laid down.

Survey of forest tracts little known, urgently required.

Sources of revenue in the hitherto well-stocked portion of the Anamallai forest, almost exhausted

9. *The financial results* of the past year would have been more satisfactory, had the timber handed over to the Bombay Marine been shewn in this year's accounts. It is, however, satisfactory to know that the accumulation of four years timber has been disposed of, though not all handed over and paid for. By strenuous exertions this year, I expect to remove almost all the timber lying in the various timber depôts to the coast, ready for delivery next February. The sum that will appear in next year's accounts to the credit of the Anamallai forest, will not be much under 2½ lakhs. The account current does not show the real profit of the year, as only the sum of money actually paid or credited by departments appear ; for instance, 2,150 planks handed over to the Bombay Marine Department, amounting approximately in value to Rupees 60,000.

Financial result.

Accumulation of four years, disposed of to the Bombay Government.

The actual receipts were as follows :—

Receipts	From the Agent for Gun Carriages at Bombay	11,618	10	8
	,, Executive Engineer at Coimbatore	248	13	3
	,, seignorage of timber felled in the Ponachy Valley	172	4	5
	Total	12,039	12	4
Expenditure.	And the expenditure for—			
	(a) Conservancy and Working	12,250	12	0
	(b) Establishment	6,885	10	11
	Total	19,136	6	11
Balance	Leaving a balance against the forests of Rs.	7,096	10	7

10. The sources whence the Contractors for the Madras Railway Company derive their fuel, has engaged my attention. I believe that at present it almost all comes from the private forests in the Palghaut Taluq and from the strip of Cochin territory lying in the Coimbatore District. I can hardly help suspecting that a portion comes from those tracts so imperfectly guarded, lying between the eastern corners of the Palghaut range of Hills round by Lambton's Peak to the Bhowany river. Part, no doubt, also comes from those puttah lands near Waliar, before referred to, as having been given away on leases. But, until the protective establishment of the range is increased, as recommended in my letter No. 532 of the 25th May 1867, I cannot hold the present limited establishment responsible for such depredations. Three forests, containing the most valuable timbers in India and extending upwards of forty miles from east to west, and the same distance from north to south, averaging ten miles in breadth and in close proximity to a line of Railway and two large towns, require more than one Overseer, one Duffadar and five Peons to protect them. The wholesale manner in which the private forests are being worked in this district; regardless of every consideration save that of present profit, by the contractors, must in less than five years, utterly denude them of every stick of timber. The Government forests and fuel reserves, of which one is about to be formed in the this range, will then be the only sources whence fuel or timber can be obtained by the Railway, the Public, or the Government. Our revenue will largely benefit by this, but to securely anticipate this desirable result, we must increase the protective establishment of the range by one Overseer to be stationed at Bolumputty and three more Peons; without this provision, depredations will increase in our forests in the same ratio as the private forests become denuded.

Sources whence Contractors for the Madras Railway obtain fuel.

Insufficient establishment.

Wholesale manner in which private forests are worked.

Probable increase in the Revenue.

11. A large number of the trees in these forests, consisting of what we term 2nd class, having hitherto been unused, I have endeavoured to obtain a demand for them in the market. With this view, when in Madras lately I visited Mr. Deschamps' furniture rooms, and was surprised to see the use to which a tree known as the Kurrah Murdah (*Terminalia*) could be applied. There may be seen a beautiful piece of cabinet-work highly polished and ornamented, rivalling almost in appearance rosewood, made from this tree. So struck was I with the beauty which art had extracted from the commonest tree almost in these forests, that on Mr. Deschamps' application I engaged to supply him with specimen logs of Vengay, Irool, Kurrah Murdah, and other trees; these he intends to introduce to the cabinet makers of Europe during his approaching visit to Paris, with a view of ascertaining how far they are adapted to the requirements of the home market. Mr. Deschamps has agreed to pay for these logs at our own prices. I am in hopes, therefore, that when known, a demand will be created for these descriptions of timber and produce an increase in the revenue.

Market for 2d Class Fees.

Uses to which the Kurrah Murdah. (Terminalia) can be applied.

Mr Deschamps' design of introducing our 2nd Class woods to the Home market.

12. The greatest difficulty next to proper carriage that I have had to contend with has been the disrepair of the district roads. The road along which we transport the whole of the timber supplied to the Bombay Government, namely, from the foot of the Anamallai slip to the floating depôt at Mungarah, is impassable. I addressed the Superintending Engineer of the 7th Division on this subject in January 1867. He replied that he considered the road should be repaired by the Forest Department and that he had no funds wherewith to repair it; and, moreover, on the grounds that the Forest Department made more use of it than the general public. Whether this is the case or not, I will not here argue; but in the meanwhile a valuable source of revenue to Government is sacrificed for want of this road, and the Bombay and Madras Governments are kept out of timber at a critical time and when the demand is most urgent.

Disrepair of District Road

13. The value of elephants in the forest was strikingly illustrated during last working season, when the combination among cartmen deprived us of their services. These useful and docile

creatures were extensively employed in performing the work of transporting the timber to the head of the slip. This was done by dragging with a rope made in the forest from the Vacanar fibre, held in their teeth by the elephants. There are six female and one male elephant attached to the Anamallai Range. During the last five years each female but one has calved, a fact almost unprecedented in captivity. It is interesting to see the calves following their mothers in their daily work refusing to be separated.

14. It is with much regret I have to announce the death of the eldest calf in February last from worms. The others are in good condition.

Health of the Establishment.

15. The health of the Establishment has been, as usual, indifferent. The trying climate and constant attacks of fever have debilitated most of the subordinates. One peon died suddenly in February. Work is often interrupted, and sometimes altogether suspended by the severe attacks of fever, dysentery, and colic, to which the subordiates who have been any time in the range, are exposed.

16. In conclusion, I have to observe that on assuming charge of this range I found much accumulation of work. In fact, all the subjects enumerated in para. 5 of this Report had to be entered into. I have endeavoured to effect their completion as rapidly as possible, but as will be perceived much remains to be done. I am happy to report the cheerful manner in which Messrs. Overseers Lloyd and Truter have carried out my instructions, and the zeal, discretion and energy they have evinced in the several duties assigned to them. The subordinates were in a undisciplined state on my assuming charge, but I have endeavoured, by holding out hopes of promotion and advancement, to incite them to an energetic discharge of their duties. Perhaps this state of affairs had arisen from the repeated changes in last four years of the Officers in charge of this range, rendering the subordinates careless and inattentive, exposed as they are to temptations on all sides from unprincipled traders, it requires systematic and close observation of the executive to discover and check such evils.

TABLE A.

	Rs	As.	P.	Rs.	As.	P.
Outstanding against the defaulting Contractors as per last year's account	.....	....	....	8,645	8	0
Deduct						
Amount worked out by Contractors in 1866-67	2,289	7	2			
Amount recovered in cash	813	8	0			
				3,102	15	2
Balance outstanding against Contractors	.....	.....	....	5,542	8	10

H. M. GOSLING, Lieutenant,
Deputy Conservator of Forests.

APPENDIX L.

Mudumallai.

From

Major H. R. MORGAN,
Deputy Conservator of Forests.

Sir,—I have the honour to forward the Annual Report of the Forests under my charge for the official year 1866-67.

The expenditure for the whole of the forests amounts to Rupees 77,268-14-11, and the receipts to Rupees 1,34,117-12-8, shewing a profit of Rupees 56,848-13-9 on the transactions of the year, with wood in store valued at Rupees 2,37,046-1-11, as per Tables, A and B, and the financial returns, six in number, marked D.

1. Mudumallai Forest.—The operations in this forest for the past year, have been conducted by myself, as the Overseer has been laid up for the whole year with repeated attacks of fever.

2. The main road has been carefully repaired and new wood depôts formed on the branch roads.

3. The quantity of timber felled and stored in depôts this year is but small, namely, 21,637¾ cubic feet, at a cost of Rupees 2,020-6-4. It is not intended to increase the stock on hand, the present amount being deemed sufficient for the calls of the next two years. The amount of timber sawn is 13,894¼ square feet, at a cost of Rupees 618-5-7.

4. Elephants have dragged from the forests to the road 20,536 cubic feet, at a cost of Rupees 2,038-1-0. There are at work, on an average, twenty-five carts, which have carted from the depôts of the Karkana to Musinigoody and Seegur 5,452½ cubic feet, and from the forest depôts to the Karkana 8,305½ cubic feet, which, at the contractor's rates, amounts to Rupees 5,483-12-0, against their feed and keep of Rupees 4,188-0-11. Contractors have received Rupees 17,714-5-8, including last year's balance of Rupees 6,318-1-8, and have carted to Ootacamund 31,074 cubic feet, and from the forests to the Karkana 507½ cubic feet, amounting to Rupees 31,610-7-10, which leaves a small balance of Rupees 5,278-12-9 to be accounted for during the present official year.

5. A small sum has been recovered by the sale of jungle wood, and the amount has been carried to forest revenue ; the demand for Jungle wood, such as Vengay, is still very small.

6. There has been no seizure of wood clandestinely felled during the year.

7. Timber sold to merchants in the forests is 800 cubic feet ; in Ootacamund Depôt is 893⅝ cubic feet ; in Moosinigoody, 25 cubic feet, amounting in all to Rupees 3,310-11-5, which has been carried to forest revenue. The demand by the Mysore merchants has been small.

8. The quantity of timber to be accounted for is given in Table B. The quantity of timber supplied from Ootacamund Depôt to the Lawrence Asylum works, &c. on the Neilgherries, is 33,096½ cubic feet, and that supplied from the Karkana to other works 1,150½ cubic feet, the total value amounts to Rupees 65,373-8-6, which has been adjusted on receipts from time to time. The timber sold to the public in Ooty depôt, 989¼ cubic feet, amounts to Rupees 3,048-0-8.

9. The outstanding advances remaining to be adjusted amount to Rupees 11,144-6-0, and the particulars are given in Table C.

10. *Teak plantation.*—The trees planted in 1864 have made fair growth, some being ten feet in height ; those planted in 1865 have not done so well, the last two years having been very dry, preparations are being made this year for planting ten acres, should labour be available.

11. Of forest products, there are several enumerated in the last Annual Report.

12. No criminal prosecutions.

13. The health of the forest establishment has been much worse than usual, indeed, it was with the utmost difficulty that the ordinary works for the year were carried on.

14. *Acrocarpus fraxinifolus* is a valuable timber, and occurs in large quantities from 4,000 to 5,000 feet elevation in the neighbouring forests.

15. In summarizing the operations for the past year, I would observe that the financial results may be considered satisfactory as, notwithstanding that labor has risen from six rupees to nine rupees a month, owing to the famine ; that carting charges have risen 30 per cent ; that murrain has been rife, there is a net profit of Rupees 22,539-1-7.

16. The expenditure for the year amounts to Rupees 47,072-3-7 and the receipts to Rupees 69,611-5-2, shewing a profit of Rupees 22,539-1-7.

I have the honour to be, &c.

H. R. MORGAN, Major,
Deputy Conservator of Forests.

OOTACAMUND, 30*th April* 1867.

APPENDIX M.

SEEGUR AND SOTTIAMUNGALUM.—1. These forests have been worked for the past year by 3rd Class Overseer Appavoo Moodelly, who has carefully discharged the duties entrusted to him,

2. The quantity of Sandalwood felled and stored in depôts is 8,962 maunds, valued at Rupees 28,548-13-6.

3. *There are no elephants, but four pairs of buffaloes are employed* for dragging timber.

4. A small amount of Vengay has been sold at Suttiamungalum. The total amount realized under license is Rupees 1,338-6-4, which has been carried to the credit of forest revenue.

5. No timber has been confiscated for clandestine felling.

6. The value of timber and Sandalwood sold to merchants is Rupees 25,161-8-0, carried to the forest revenue. The particulars of the quantity of timber in store are given in Table B.

7. *A small quantity of timber has been supplied to Public Departments.*

8. The advances are very small, namely, Rupees 289-2-7, and the particulars are enumerated in Table C.

9. A large nursery of sandal trees is kept up, and experiments in planting are being carried out. It is our endeavour to imitate nature as closely as possible by sowing in rows six feet apart and then raising a bamboo hedge two feet high and three feet wide over the sides, the young plants obtain shelter from the sun and protection from wild animals.

10. There are no forest products in demand in this range *except the bark of Acacia leucophlea*, used by the Abkari contractors; the root called *poplay chukkay*, employed by native dyers; and gallnuts. These, though not under my control may, with advantage, be placed under the Forest Officer.

11. No special trespasses or damage have been committed.

12 Some persons have died from fever, the jungles in the vicinity of Hassanoor being deadly for great part of the year.

13. The principal operations during the year have been preparing sandalwood and forming an experimental plantation of this tree; the usual conservations of forests has been carefully carried out.

16. The financial results may be considered satisfactory, the expenditure being Rupees 9,683-3-0, and the returns Rupees 26,513-14-4, shewing a profit of Rupees 16,830-11-4, with an increase of wood in store valued at Rupees 37,173-3-5.

APPENDIX N.

BHOWANI.—1. The work has been carried on during the year by Overseer Grant, who has been diligent in the performance of his duty.

2. The usual conservation of the jungles has been carefully attended to.

3. The quantity of sandalwood felled and stored in depôts is 7,342½ maunds, valued at Rupees 16,453-1-0.

4. *There are no elephants or public cattle in this range.*

5. The sales by license of Teak, Vengay, Acha, &c. woods amount to Rupees 1,291-8-8, which has been carried to the credit of forest revenue.

6. *There has been no confiscated timber.*

7. The value of sandalwood sold to the contractors is Rupees 15,000, which has been carried to credit of forest revenue, and the balance of wood in hand is 588½ maunds of sandalwood, valued at Rupees 1,453-1-0, as per Table B.

8. *No timber has been supplied to Public Departments.*

9. Rupees 305 is the total of the outstanding advances remaining to be adjusted on 31st March 1867.

10. No plantations have yet been made, but when the Burghoor Road is completed, a suitable spot will be selected; water is very scarce in these jungles during the dry weather.

11. The present Overseer and Gomastah have enjoyed good health, but the Peons have been laid up with fever, and the late Overseer, Mr. Sharland, died of fever at the commencement of the year.

12. No special cases of trespass have been reported.

13. The operations have been confined to preparing sandalwood, issuing licenses, and conserving the jungles

14. The financial results are satisfactory, when it is considered that a large amount has been transferred to the Burghoor ghaut road, namely, Rupees 1,500 in addition to Rupees 3,500 last year. This road, when finished, will no doubt be useful to the Forest Department, but as the public will also use it, they ought to pay a share. The expenditure is Rupees 6,642-11-7, the receipts are Rupees 16,291-8-8, the profit is Rupees 9,648-13-1, with an increase of wood in hand valued at Rupees 1,453-1-0.

APPENDIX O.

COLLEGAL. 1. The operations for the year have been carried on by Overseer Spring, who has done well, though he has suffered from severe fever.

2. The sandalwood jungles have all been explored and are now known, the Acha, Vengay, and other forests have been explored, and in time will no doubt be worked to advantage. At present, the small demand for timber in Collegal prevents our working these forests. *The* contemplated extension of the Burghoor ghaut road to Collegal will open up these forests.

3. The quantity of timber felled is as follows:—

1,988 maunds of Sandalwood.

6¼ cubic feet of Blackwood.

„ do. of Teak.

7½ do. of Junglewood.

4. The carts and bullocks have been very useful in bringing in sandalwood from the distant parts of the forests, when hired transport was not available; indeed, the work could not have been carried on without them, murrain and dearth of grain having been prevalent throughout the district.

5. No timber, firewood, &c. has been removed by wood-cutters under the license system. Rupees 634-2-2 have been realized from seignorage on firewood, bamboos, &c. *collected by this department.*

6. The amount realized from confiscated wood is Rupees 25, half of which was paid to the informer, and the other half carried to forest revenue, *agreeably to the old rule on this* point.

7. Timber, chiefly sandalwood, to the value of Rupees 16,215-9-4, has been sold and carried to the credit of forest revenue, and the particulars of the wood in store are given in Table B.

8. The wood supplied to the Department Public Works amounts to Rupees 34-3-6, this has been adjusted on receipts furnished.

9. The advances are very limited, and outstandings are given in Table C.

10. Nothing has yet been done in planting, but the Overseer in charge has selected a suitable site for the year's operations, which will be commenced shortly.

11. *No minor forest produce is at present under the management of this department.*

12. There has been no criminal prosecutions, *with* one exception.

13. The Overseer has been very ill from fever and every peon has suffered.

14. The operations have been confined to sandalwood felling; these works are now carried on near Vylore at the western end of the Ballyrungum Hills.

15. The result appears satisfactory, the expenditure is Rupees 7,730-4-9, the return Rupees 16,866-9-6, the profit Rupees 9,136-4-9, with an increased stock of wood in store of Rupees 3,644-12-0, including the balance of Rupees 1,205-8-10 due by the contractor on account of wood sold to and removed by him up to 31st March 1867.

APPENDIX P.

NEILGHERRY SHOLAS.—1. These have been carefully conserved by Overseer Taylor, near Ootacamund, and by Overseer Newman in the neighbourhood of Wellington and Coonoor.

2. Boundaries of Government sholas and private estates are being laid down by the Settlement Department. This is a work of great importance.

3. There is a large amount of firewood in Devi shola ready for stacking, but it cannot be much used, as the tenant stacks it but slowly.

4. The carts and bullocks at Devi shola have been doing almost nothing, as there was no wood for them to remove. The number of bandy-loads carted to the road by bullocks is 120 bandy loads, at a cost of Rupees 98-10-8, including feed and keep of bullocks. These have since been made over to Mudamullai forest.

5. There was no wood sold during the year from sholas on seignorage.

6. A good deal of wood, in the shape of head-loads, has been confiscated, but it has no effect—the Sub Magistrate's punishment consisting of simple confinement for six or eight hours,* or eight annas fine. No money was realized by confiscations during the year.

7. 1,811 cart-loads of firewood were supplied to the Lawrence Asylum Works, and 1,406 loads to the Cattle shed at Coonoor, the value of these amounts to Rupees 1,027-7-8, which has been adjusted on receipts furnished by the Department Public Works.

8. Rupees 871-4-2 are the advances remaining to be adjusted on 31st March 1867.

9. In the Building Plantations near the Pykara sign-post, 7,051 plants *(Eucalyptus Globulus)* have been put out; 3,520 have been mossed; 1,350 plants are in beds; and 1,500 yards of trenching are finished. In the Governor's shola 12,400 *Acacia mollissima* and A. *melanoxylon* plants have been put out, and 22,220 plants mossed for planting out. The nurseries contain 12,400 Australian *Acacias* and 10,671 *Eucalypti*.

10. The rosin of *Eucalyptus Globulus* is said to be efficacious in dysentery.

11. The health of the forest employés has been good.

12. The operations have consisted in conserving the Government sholas, forming nurseries, extending plantations of timber trees and firewood, and supplying the Department Public Works with fuel.

14. The financial results are not very satisfactory, due partly to our not coming to terms with the Devi shola tenant, and partly to the immense amount of shola land sold during the year to the public. The expenditure is Rupees 4,500-8-0, the returns are Rupees 4,320-11-0, and the balance against the shola is Rupees 179-13-0, with plant valued at Rupees 13,353-0-1.

APPENDIX Q.

AUSTRALIAN PLANTATIONS.

1. The works here have been carefully carried on by Overseer Newman.
2. No measures of conservancy proper considered necessary.
3. No timber felled or stacked in depôts.
4. There is one cart for carrying plants from the nursery to the plantation.
5. No timber confiscated on account of clandestine felling.

* NOTE.—This has since been altered, and as much as 25 days' imprisonment inflicted.

6 There was no timber confiscated during the year.

7 15 Poles, &c , to the value of Rupees 16, have been sold to the public

8 The D P W made no demand for timber from this Plantation this year

9 The outstanding advances remaining to be adjusted on 31st March 1867, is Rupees 100 against the brickmaker, which will be adjusted in course of this month.

10 The number of trees planted out is as follows —

Eucalyptus globulus ..	2,000
Acacia mollissima ..	4,580
Acacia melanoxylon ..	—
In pots	
Eucalyptus globulus	1 600
Acacia mollissima	2,400
Number not yet transplanted	
Acacia mollissima	2,600
Acacia melanoxylon	—

13. The health of the people employed in the plantation has been good.

14 The operations have been confined to planting out, increasing the nursery, and supplying firewood to the public from the old plantation The receipts from this head have been Rupees 498-12-0

15 The expenditure is Rupees 1,820-10-8, and the returns are Rupees 513-12-0, leaving a balance of Rupees 1,306-14-8 against the plantation

Financial results of the different forests.—See pages 11, 12, 13 and 14, paragraphs, 68, 73, 77, 81, 87 and 94, also page 50

H R MORGAN, Major,
Deputy Conservator of Forests

Note —The supply of wood during the year from these plantations has been small, due to the fact that Coffee planters in the vicinity have entered the market and sold their wood cheaper than it was considered advisable to offer the Australian wood, considering the cost of production and its prospective value, which is undoubted In a few years, there will be no other available source for obtaining firewood near the Barracks

TABLE A.

STATEMENT *shewing the Receipts, Expenditure, and the Financial Results of the undermentioned Forests for the official year* 1866-67, *in contrast with the year* 1865-66.

FORESTS.		RECEIPTS.												EXPENDITURE.										FINANCIAL RESULT.					
		Timber, &c. sold to the Public.			D. P. W.			Seignorage.			Miscellaneous Receipts.			TOTAL.			Pay of Deputy Conservator and Establishment.			Working charges.			Office Contingencies.			TOTAL.			Balance in favour of Government			Balance against Forest.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Mudumallai.	1865-66	9,533	0	5	57,028	12	10	724	0	0	284	14	3	67,570	11	6	15,910	15	6	48,946	11	4	33	8	0	64,891	2	10	2,679	8	8	...	...	...
	1866-67	3,048	0	8	65,373	8	6	1,000	0	0	189	12	0	69,611	5	2	16,951	3	5	29,576	10	6	544	5	8	47,072	3	7	22,539	1	7	...	...	...
Seegur.....	1865-66	26,967	8	5	...	...	...	1,229	9	0	72	0	0	28,269	1	5	2,078	5	0	9,475	14	0	...	...	...	11,554	3	0	16,714	14	5	...	...	...
	1866-67	25,161	8	0	14	0	0	1,338	6	4	...	...	...	26,513	14	4	1,714	0	0	7,961	14	0	7	5	0	9,683	3	0	16,830	11	4	...	...	...
Neilgherry...	1865-66	...	...	...	845	0	0	2,825	7	6	230	2	6	3,900	10	0	1,728	0	0	4,237	7	2	...	...	...	5,965	7	2	...	...	...	2,064	13	2
	1866-67	...	...	...	1,677	10	0	1,693	1	0	950	0	0	4,320	11	0	1,824	0	0	2,630	0	0	46	8	0	4,500	8	0	...	...	...	179	13	0
W. A. Plantation.....	1865-66	...	...	...	20	0	0	543	0	0	1	8	0	564	8	0	480	0	0	1,688	5	3	...	...	...	2,168	5	3	...	...	...	1,603	13	3
	1866-67	...	...	...	...	...	...	513	12	0	...	...	...	513	12	0	440	0	0	1,200	0	0	...	...	...	1,640	0	0	...	...	...	1,126	4	0
Bhowani. ...	1865-66	14,170	14	6	...	...	...	606	12	8	...	...	...	14,777	11	2	2,330	0	0	5,575	11	8	...	...	...	7,905	11	8	6,871	15	6	...	...	...
	1866-67	15,000	0	0	...	...	...	1,291	8	8	...	...	...	16,291	8	8	2,031	5	7	4,600	0	0	11	6	0	6,642	11	7	9,648	13	1	...	...	...
Collegal.....	1865-66	16,036	2	10	34	3	6	782	3	7	...	...	...	16 852	9	11	2,371	14	4	3,802	5	3	...	...	...	6,174	3	7	10,678	6	4	...	...	...
	1866-67	16,2 5	9	4	16	14	0	634	2	2	...	...	...	16,866	9	6	2,200	0	0	5,500	0	0	30	4	9	7,730	4	9	9,136	4	9	...	...	...
		59,425	2	0	67,082	0	6	6,470	14	2	1,139	12	0	1,34,117	12	8	25,160	9	0	51,468	8	6	639	13	5	77,268	14	11	58,154	14	9	1,306	1	0
																													1,306	1	0			
																													Net profit Rupees...			56,848	13	9

OOTACAMUND,
1st *April* 1867

H. R. MORGAN, MAJOR,
Deputy Conservator of Forests.

TABLE B.

STATEMENT *shewing the quantity of Timber felled and sold during the year* 1866-67, *and the balance remaining on hand on* 31*st March* 1867, *in contrast with the year* 1865-66.

Forests.		Balance of Wood on 30th April 1866.			Value of Wood felled in 1866-67.			Total.			Value of Wood supplied to the Public,			Value of Wood supplied to the D. P. W.			Value of Wood destroyed by fire.			Total.			Balance in hand on the 31st March.		
		Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Mudumallai.....	1865-66...	1,70,284	6	0	1,11,737	14	9	2,82,022	4	9	9,533	0	5	57,028	12	10	...	...	...	66,561	13	3	2,15,460	7	6
	1866-67...	2,15,460	7	6	47,736	3	2	2,63,196	10	8	3,048	0	8	65,373	8	6	...	...	...	68,421	9	2	1,94,775	1	6
Seegur.....	1865-66...	20,54.	8	9	40,207	13	7	60,753	6	4	26,967	8	5	...	...	...	...	...	...	26,967	8	5	33,785	13	11
	1866-67...	33,785	13	11	28,562	13	6	62,348	11	5	25,161	8	0	14	0	0	...	...	...	25,175	8	0	37,173	3	5
Neilgherry.....	1865-66...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	1866-67...	...	...	...	1,677	10	0	1,677	10	0	...	...	...	1,677	10	0	...	...	...	...	...	...	...	...	...
Wellington, Australian Plantation.	1865-66...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...
	1866-67...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Collegal.....	1865-66..	1,516	8	0	19,378	3	8	20,894	11	8	16,036	2	10	34	3	6	273	12	0	16,344	2	4	4,550	9	4
	1866-67...	4,550	9	4	15,644	12	0	20,195	5	4	16,215	9	4	141	12	0	193	4	0	16,550	9	4	3,644	12	0
Bhowani.....	1865-66...	5,250	0	0	14,920	14	6	20,170	14	6	14,170	14	6	...	...	...	...	...	...	14,170	14	6	6,000	0	0
	1866-67...	6,000	0	0	10,453	1	0	16,453	1	0	15,000	0	0	...	...	...	...	...	...	15,000	0	0	1,453	1	0
		2,59,796	14	9	1,04,074	7	8	3,63,871	6	5	59,425	2	0	67,206	14	6	193	4	0	1,25,147	10	6	2,37,046	1	11

OOTACAMUND, 1*st April* 1867.

H. R. MORGAN, *Deputy Conservator of Forests.*

TABLE C.

List of advances remaining unadjusted in the undermentioned Forests on 31st March 1867.

No.	Value of advances.	Balance unadjusted on 1st March 1867.			Advance made in March 1867.			Total.			Recoveries.									Balance unadjusted on 31st March 1867.			Remarks.
											Work.			Cash.			Total.						
	Mudumallai.	Rs.	A.	P.	Rs.	A.	P.	Rs	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs	A.	P.	Rs.	A.	P.	
1	Coorumbers	591	3	2	361	0	0	952	3	2	435	6	0	...	...	...	435	6	0	516	13	2	
2	Sawyers (old set)	436	14	1	...	...	...	436	14	1	..	..	...	..	...	...	...	...	...	436	14	1	
3	Sawyers (in Ooty)	0	0	4	..	..	...	0	0	4	..	..	..	0	0	4	0	0	4	...	..	..	
4	Sawyers (new set)	28	11	10	34	4	9	63	0	7	34	4	9	...	...	...	34	4	9	29	11	10	
5	Bandymen	5,461	6	1	1,867	4	8	7,328	10	9	1,507	14	0	542	0	0	2,049	14	0	5,278	12	9	
6	Provision Contractor	4 305	3	2	..	..	...	4,305	3	2	844	6	4	600	0	0	1,444	6	4	2,860	12	10	
7	Paddy Contractor	160	0	0	...	..	...	160	0	0	...	...	..	...	...	...	..	..	...	160	0	0	
8	Provision in Store	1,587	3	11	844	6	4	2,431	10	3	632	4	6	271	12	0	904	0	6	1,527	9	9	
9	Office Contingency	25	0	0	14	5	0	39	5	0	32	5	0	...	...	...	32	5	0	7	0	0	
10	Miscellaneous	328	11	7	...	..	...	328	11	7	...	...	...	...	...	...	...	...	...	328	11	7	
	Total...	12,924	6	2	3,121	4	9	16,045	10	11	3,486	8	7	1,413	12	4	4 900	4	11	11,145	6	0	
	Seegur.																						
1	Coorumbers	289	2	7	...	...	...	289	2	7	...	...	...	...	...	...	...	...	...	289	2	7	
	Total	289	2	7	...	...	.	289	2	7	...	...	..	...	...	...	...	..	.	289	2	7	
	Neilgherry.																						
1	Establishment	54	0	0	...	.	..	54	0	0	..	...	..	...	...	...	...	...	...	54	0	0	
2	Workmen	723	9	6	172	5	6	896	5	6	...	...	...	79	1	4	79	1	4	871	4	2	
	Total. .	777	9	6	172	5	6	950	5	6	...	...	...	79	1	4	79	1	4	925	4	2	
	Wellington.																						
1	Miscellaneous	100	0	0	...	..	...	100	0	0	...	...	..	100	0	0	100	0	0	...	..	..	
	Total...	100	0	0	...	...	..	100	0	0	...	...	...	100	0	0	100	0	0	..	...	...	
	Bhowani.																						
1	Establishment	10	0	0	...	.	..	10	0	0	...	...	...	...	...	...	...	...	...	10	0	0	
2	Workmen	295	0	0	...	.	...	295	0	0	...	...	...	...	...	...	...	...	...	295	0	0	
	Total...	305	0	0	...	...	...	305	0	0	..	...	...	...	...	...	...	...	..	305	0	0	
	Collegal.																						
1	Workmen	412	7	0	...	...	...	412	7	0	...	...	...	412	7	0	412	7	0	...	...	...	
2	Office Contingency	11	0	0	...	...	...	11	0	0	...	...	...	11	0	0	11	0	0	...	..	.	
3	Paris Exhibition Committee	27	3	11	...	...	...	27	3	11	...	...	...	22	13	11	22	13	11	4	6	0	
	Total...	450	10	11	...	...	.	450	10	11	...	...	...	446	4	11	446	4	11	4	6	0	

H. R. MORGAN, Major,
Deputy Conservator of Forests.

APPENDIX R.

SALEM FORESTS.

SALEM, *29th April* 1867.

From

Lieutenant C. J. WALKER,
Deputy Conservator of Forests.

I have the honour to submit my Annual Administration Report for 1866-67.

SALEM FORESTS.—1. I have remained in charge of these forests during the past year. The changes amongst the Overseers have been numerous, and led to serious inconvenience. I trust that no further removals, &c. may be found necessary.

Mr. Overseer Mahomed Ally acted as Head Overseer from the date of Mr. Gueizelar's dismissal (20th April) to the 1st August, when he was relieved by Mr. G. Grant, Mr. J. Shrieves acting as Assistant Overseer during this time.

Mr. Grant only remained two months in the district, during which time he gave satisfaction, and was promoted on 1st October to charge of Bowany forests. Mr. Mahomed Ally being then appointed Head Overseer (pending confirmation), and Pensioned Sergeant W. Hodgson, filling the vacant post of Assistant Overseer in charge of Tripatore Range on probation. Mr. Lloyd, Overseer of South Arcot, having also been promoted on the 1st August to charge of Bolamputty forests, his place was filled by Rungia Naidoo, formerly writer in the Salem Forest Office. Mr. Shrieves has since acted as writer, pending a vacancy in the Department as Overseer, for which post he is better adapted, and I trust on a vacancy occurring, his claims may be remembered. I was thus left with only one Overseer of any experience, Mr. Mahomed Ally, whose invariably careful and zealous performance of his duties deserves the highest praise. Mr. Hodgson will, I trust, turn out well and prove a useful Assistant; he is at present new to the work.

2. I submit a Return, marked A, shewing the number of sandal and other trees cleared of creepers and brushwood during the year. The number would have been greater, especially on the Javady Hills, but for the frequent changes in superintendence.

The sandalwood tracts of Billykul and the adjacent Achawood forests, have been visited and reported on (see page 21) and attention has been given to several tracts of young Teakwood in the Denkencottah and Tripatore Ranges. I regret that owing to press of other business, I have not been able to complete the exploration of the Javady Hills as directed in Government Order No. 1173 of 17th May 1866. I expect, however, to do so at an early date. Meanwhile, the tracts alluded to in my former report have been reserved, and will be marked by boundary pillars on my next visit, and other measures taken to preserve the forests.

The boundaries between Sirkar and Jagheer forests on the Colroy Hills, Ahtoor Taluq, require re-settlement. I arranged to visit those Hills with the Collector last October, and effect a definite arrangement, but that officer was prevented from going at the last moment. I therefore postponed the visit to this year, when the Acting Collector has kindly promised to accompany me.

3. DENKENCOTTAH RANGE.—2,178 maunds of sandalwood and 479 maunds of roots have been collected and stored in the forest depôts during the year; 770 cubic feet of Acha and other timber have been felled, dragged and carted to the timber yard which has been formed at Denkencottah. Carriage is somewhat difficult to obtain in this range, and it may be advisable for the department to keep a few buffaloes, or even one or two elephants. The latter would be specially useful in working the Acha forests, the beams of which timber are large and very heavy (the wood does not float in water), and the ground in which it is found is invariably rocky and uneven. The speedy construction of the forest roads, now in progress, is most important.

TRIPATORE RANGE.—1,843 maunds of sandalwood were felled and stored in the central forest depôt on the Javady Hills during the year. Much difficulty was experienced in getting contractors to keep to time, and the work is now being carried on by cooly labour under the

Departmental peons. Owing to the great loss of cattle, from want of pasture throughout the range during the year, difficulty was experienced in obtaining carriage for the billets from the hills, and high rates had to be given. I trust that rates may fall, as the yield of these forests would not justify the department keeping cattle of its own.

SALEM RANGE.—164½ maunds of sandalwood were felled on the Kolla Mullays and stored in Salem depôt.

4. All carriage during the year has been executed by contractors.

5. The quantity of timber, &c. of each class, removed from the forests during the year on payment of seignorage, is shewn in Statement B.

6. The amount of timber confiscated and sold by auction is slightly less than last year, and the amount credited to Government on this account was Rupees 804-3-11. A sum of Rupees 267-9-8 was distributed in rewards to informers, particulars of which are shewn in Statement C. The timber, except in very few instances, in which the time given on licenses produced had long expired, was found to have been clandestinely felled.

7. DENKENCOTTAH RANGE.—2,050 maunds of prepared sandalwood; 539¾ maunds of roots, and 27 maunds of chilkah and chips were sold from the central depôt in January.

The rates realized were in excess of former years, that for the billets being Rs. 4 per maund of 28 pounds, the wood was of excellent quality, though of small size. All large trees having been removed, felling must cease from this year and the sandalwood tracts be allowed time to recover.

TRIPATORE RANGE.—1,085¼ maunds of prepared sandalwood were sold at the rate of Rupees 4 per maund and 15 maunds of chilkah at 2 Rupees per maund. This was gratifying, as great doubts had been entertained that the sandalwood might prove inferior in quality and without aroma, like that found in the Nulla Mullay forests. I do not think the "*caste*" is so good as the Denkencottah sandalwood; but this being the first cutting, the billets were large. A supply for two or three years more is obtainable; felling and preparing is going on.

SALEM RANGE.—281 maunds of prepared sandalwood brought from the Kolla Mullay forests, Namcul Taluq, realized Rupees 3-8 per maund, which was favourable. A small supply is still obtainable: but most of the trees were found to be in puttah lands.

8. A small quantity (eighteen bandy-loads of Dinduga wood) was supplied to the Remount Agent, Oossoor, on payment of seignorage, and the amount, Rupees 54, has been credited in the annual accounts and voucher submitted for adjustment.

9. Outstanding advances amount to Rupees 2,378-1-5, but of this sum Rupees 2,155-5-8 has been paid to the Assistant Engineer, Oossoor Range, for carrying on the forest road to Anchetty, and his receipt taken for the amount, which will be gradually worked off and bills submitted. The remaining outstanding advances amount to Rupees 222-11-9, which is made up of small sums unadjusted on account of sandalwood in the several ranges, and against which must be set the quantity of wood felled but not prepared, which cannot therefore be taken over and the account adjusted.

10. PLANTATIONS.—A few acres near Mullapooram Railway station were planted with Babool *(Acacia Arabica,)* in July, but owing to the failure of the monsoon, few seeds germinated. Seed is being collected, and the experiment will be repeated on a larger scale. I stopped the sowing last year, as there was no rain at all. I trust to have better success this year, last season must be considered quite exceptional. The expense for clearing the grounds, &c. will not have to be repeated; but I fear we must dig a trench all round, as the temporary fence will not last another twelve-month and must be re-placed before anything is done.

I have also taken up some land on the slopes of the Shevaroys, near the Ahtoor ghaut, and propose trying a plantation of Toon-trees *(Cedrela Toona)* which grows well on those hills, and can be reared at little expense.

11. *Forest produce.*—No further information regarding forest products has been obtained during the year; five pounds of Kupli Podi *(Rottlera tinctoria)* were supplied to the Medical Storekeeper, Madras, for officinal purposes, and a large quantity has been indented for by the Agri-Horticultural Society, and will be supplied during the year.

12. Great damage has been done to the forests during the year by illicit felling, and lacs of young trees and bamboos have been felled by cattle drivers for their cattle. Many cases were detected and brought before the Magistracy, but in Salem Range the parties were invariably released without punishment, save the loss of the wood, which is not adequate. In Denkencottah and Tripatore Ranges I obtained several convictions, but on an appeal from the decision of the Head Assistant Collector of Tripatore in a case of great importance, where a man had felled a splendid Vengay tree *(Pterocarpus Marsupium)* reported to contain sixty Wudder cart-loads of timber having only a license for one bandy-load, the Civil and Sessions Judge upset the finding of the Head Assistant and released the prisoner. This case was fully reported in my letter No. 181, along with which a copy of the Civil and Sessions Court's proceedings was sent Until the law relating to forest depredations is clearly laid down, we can never make sure of convictions even with the best proof, as all depends on the view which the Magistrate takes of the nature of the offence; until this is done, therefore, no steps which we may adopt will prevent theft and mischief in Government forests. Attention has been called to the damage done on the boundaries of the North Arcot District by parties felling on passes granted by Monegars of villages.

13. The health of the establishment has been excellent, if we except fever, from which myself and the Overseers have suffered slightly and the Pygusts (Duffadars) and Peons employed in the sandalwood operations, severely on the Javady Hills.

14. No new or rare plants have been discovered.

15. I trust that the working of the department in this district will be considered satisfactory. No complaints have been received by the Collector or his subordinates, which proves that the rights of ryots have been strictly respected, and the organization and supervision ameliorated.

The forests in the Denkencottah Range are henceforward to be worked by the department. A timber yard has been formed at Denkencottah, in which the timber will be stored previous to sale. Part of the Taluq Cutcherry, which had been handed over to the department, has been converted into an Overseer's office and Sandalwood store, which was much required.

The forest road to Anchetty is being constructed slowly and at great expense by the Department Public Works, to which I have already called attention. If the construction of the two roads, recommended in my letter, No. 248, paragraphs 5, 6 and 7, be sanctioned, the extensive Achawood forests on the banks of the Cauvery River and in and around Muttoor Mullay will be opened out, and a large supply of first class timber made available for the wants of the public. This is the more important, as the felling of sandalwood throughout this range must cease, as already reported, the supply of ripewood being exhausted.

Owing to the scattered nature of the forests in the Salem and Tripatore Ranges, great difficulty is experienced in preventing illicit felling, and the same obstacle presents itself against close system working or marking the trees for felling.

I am so convinced, however, of the inadequacy of the present system of voucher and license to preserve the forests and promote true conservancy, that I intend trying a sytem of contracts in the Tripatore Range. All timber of the reserved class to be marked before being felled and paid for at fixed rates. This will release our peons from their tannahs, where they are now employed exclusively as forest police, and render them available for patrolling and watching the forests, which is their legitimate business. I may state that this plan has the Collector's approval.

The subject of supplying firewood for the Railway locomotives has received much attention. Felling has been restricted to tracts marked off by this department, and reserved tracts as sanctioned in Government Order No. 159 of 15th January 1867, are being enclosed, one near Ahtoor Railway Station having been completed.

It is impossible to find respectable men to fill the posts of Pygusts (Duffadars), and peons at the present rate of pay which is below that of any other department, and is quite inadequate if we recollect the exposures and sickness which our Duffadars and Peons undergo, and the expense they are put to by constant travelling.

TABLE A.

Salem Forests.

Statement *of Sandal and other trees cleared of creepers and brushwood during the year* 1866-67.

Range.	Number of Sandalwood trees cleared.	Number of trees of other description cleared.	Cost. Rs.	A.	P.	Remarks.
Denkencottah.....	2,089	1,018	12	4	9	These trees are much scattered and difficult to clear, having been left to nature.
Tripatore.....	616	...	10	14	...	
Total.....	2,705	1,018	23	2	9	

(Signed) CAMPBELL WALKER, Lieut.,

29th April 1867. *Deputy Conservator of Forests.*

B.

STATEMENT *shewing the quantity and description of Timber, &c, removed from the Salem Forests on License and Ticket during the official year* 1866-67

FOREST RANGE	BANDY LOADS									GRAND TOTAL OF BANDY LOADS	HEAD LOADS.								GRAND TOTAL OF HEAD LOADS
	Timber			TOTAL OF BANDY LOADS OF TIMBER	Firewood, Bamboos, &c				TOTAL OF BANDY LOADS, FIREWOOD &C		Timber		TOTAL OF HEAD LOADS OF TIMBER	Bamboos, &c			TOTAL OF HEAD LOADS, OF BAMBOOS, &C	
	1st Class	2nd Class	3rd Class		Firewood	Bamboos	Bark	Charcoal			Junglewood.	Karangalli and Satinwood for Ryots.		Bamboos.	Bark	Charcoal.		
Salem.....	696	115	243	1,054	3,142	1,999	101	287	5,529	6,583	477		477	11,049	...	8,666	19,715	20,192
Denkencottah	189	170	850	1,209	216	547	84	5	852	2,061	642	75	717	8,103	140	1,016	9,259	9,976
Tripatore.....	315	444	46	805	2,384	535	681	..	3,600	4,405	1,218	14	1,232	8,494	1,110	4,883	14,487	15,719
Total .	1,200	729	1,139	3,068	5,742	3,081	866	292	9,981	13,049	2,237	89	2,426	27,646	1,250	14,565	43,461	45,887

(Signed) CAMPBELL WALKER, Lieutenant,

Deputy Conservator of Forests

29*th April* 1867

C.

ABSTRACT *of the Statements of Timber, &c., confiscated and sold during the year* 1866-67.

DESCRIPTION.	Number of Bandy loads.	Number of Head loads.	Amount realized.			Amount credited.			Amount distributed as Rewards.		
			Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Six maunds of Sandalwood.....	...	..	20	13	0	18	9	0	2	4	0
Five Mango Planks	...	...	2	15	0	2	0	0	0	15	0
Teak, Vengay, Acha, Iroovadi, Satinwood, and Kuttooroonjee..... ...	39	...	306	7	9	236	13	9	69	10	0
Nummai, Vemboo, Naga, Madrai, and Perambai.....	47¾	...	271	4	10	227	7	10	43	13	0
Jungle and Firewood.....	61½	41	198	3	6	142	7	9	56	0	9
Bamboos.....	61½	52	210	0	2	134	1	9	75	14	5
Bark.....	3¾	...	8	12	3	5	9	3	3	3	0
Charcoal.....	9¾	125	51	12	4	36	2	0	15	10	4
Nummai and Velvalum.....	...	4	1	3	9	1	0	7	0	3	2
Total.....	223¼	222	1,071	13	7	804	3	11	267	9	8

Financial results.—See page 15, paragraph 104.

(Signed) CAMPBELL WALKER, Lieutenant,

29th April 1867. *Deputy Conservator of Forests.*

APPENDIX S.

SOUTH CANARA FORESTS.

From

MR. G. CADELL,

Deputy Conservator of Forests.

I have the honour to forward the Annual Report of the Forest Department in this district, for the official year 1866-67.

2. On the death of the late Assistant Conservator, Mr. E. Thompson, I was appointed, and took charge of the South Canara forests on the 20th December. The chief operations since that time, have been the floating of the timber already felled and the sale of it at the coast.

3 In reviewing the operations of the department throughout the year, I propose, before giving a general summary, to examine briefly the works carried on by the Overseers of the three ranges into which the district is subdivided, in order that it may appear which is the most profitably worked. I may premise that the figures given and the statements made, will be an approximation only to the real amount of work done. In explanation, I may mention that the Overseers' accounts of working charges are lumped together in the general monthly accounts, and the sums spent by the three Overseers might not make up the sum total of the month. In the same way, the receipts of the month are lumped together and it would be difficult to credit each Overseer with the amount of seignorage, for instance, collected in his talook, though the chief sources of revenue would of course appear.

4. *Forest chart.*—The accompanying map roughly drawn up, with the view of shewing the forest tracts of the district, the trees to be found in each, and the means of communication with our sea-board depôts, will at the same time serve for reference to the places mentioned in the report.

5. *Cundapur and Udapi.*—The jungles of the Cundapur and Udapi Talooks, in the north of the district, are under the charge of Mr. Overseer Wilson, assisted by a Gomastah and

six peons. The monthly cost of the establishment is Rupees 121, and the works performed have been as follows:—

Timber felled.—Jungle logs, 917; Kiral bogi, 2; Blackwood, 6; and Bamboos, 26,000.
Timber floated.—Jungle logs, 50, to Hunga kutta.
Timber carted.—Jungle logs, 159; Kiral bogi, 2, to Buja Bunda.
Elephants.—Employed for twenty-four days chiefly in dragging timber for the D. P. W.
Timber supplied to D. P. W.—149¼ candies at the price of Rs. 921-15-8.

6. *Teak Plantation*.—A small attempt was made to raise teak, but it totally failed. All the young trees died, though they received great care. I do not think that a teak plantation is likely to be a profitable undertaking in this range.

7. *Buffaloes*.—Twelve buffaloes were procured from North Canara, for the use of this establishment. The savings effected by these animals will be more apparent next year, when they will save the extravagant cart hire that has been paid this year to contractors.

8. *Expenditure*.—Working charges	3,925	11	6
Chief sources of revenue.			
Sales of wood	1,541	2	9
Sandalwood oil stills and catechu contracts	6,764	2	2
Department Public Works timber	921	15	8
Value of stock in hand.			
Wild Jack, 140 candies at 8 Rupees	1,120	0	0
Spars, 62 (at cost price)	2,000	0	0
Junglewood, 2,955 candies at 6 Rupees	17,730	0	0
Kiral bogi, 234 candies at 8 Rupees	1,872	0	0
Blackwood, 50 candies at 6 Rupees	300	0	0
Rupees. .	23,022	0	0

9. *Cassergode range*.—The establishment in this range, consist of an Overseer, Mr. Thomas, a Gomastah, and five peons, is maintained at a monthly cost of Rupees 115. The works carried out have been as follows:—

Timber felled.—Jungle logs, 75; Blackwood, 159; Teak, 1; and 12,000 Bamboos.
Timber floated.—Jungle logs, 321; Blackwood, 106; Teak, 354; and 12,000 Bamboos.
Timber supplied to D. P. W.—191¼ candies at the price of Rupees 1,375-12-0.
Elephants.—Hire (seventy-six days.)

10. *Teak Plantation*.—Twenty-eight thousand seedlings have been planted out during the monsoon, and the old plantation has been thoroughly weeded and the saplings pruned. The trees placed in virgin soil are doing very well, but the plants that were put into old coomry ground last year are stunted and unhealthy.

11. Working charges			5,976	10 7
Chief sources of revenue.				
Public sales			2,455	0 0
D. P. W. timber			1,375	12 0
Blackwood for Bombay Gun Carriage Manufactory (not realized in this year's accounts)			4,250	4 0
Value of stock of Timber in hand.				
3rd class Teak, 777 candies at Rs. 5		3,885		
Blackwood, 238½ candies	at ,, 8	1,908		
Junglewood, 1357½ do	at ,, 4	5,430		
Rupees...		11,223		

12. *Uppinangady range.*—The last of the three ranges of this district, worked by Mr Gowdie, Overseer, assisted by a Gomastah and 3 peons, at a monthly cost of Rupees 103—and the following operations have been performed by this establishment during the year.

Felling timber.—Jungle logs, 234 ; Blackwood logs, 9 ; Jack, 4 ; Wild Jack, 46.

Floating timber.—Wild Jack, 168 logs ; Blackwood, 5 ; Teak, 1 ; Jack, 1 ; Jungle logs, 2 ; and three boats, together with 800 Bamboos.

Elephants.—Hired for twenty-nine days.

Timber supplied to D. P. W.—None.

13. *Working charges.* 2,526 15 9

Principal sources of revenue.

Public sales..... 6,199 14 0

Sold to D. P. W. at public auction, but not yet realized. 1,256 0 0

Value of stock in hand.

Wild Jack, 421 candies at 8 Rupees.....	3,368	0	0
Jack, 28¾ candies at 8 Rupees.....	228	0	0
Blackwood, 82¼ candies at 8 Rupees.....	190	0	0
Kiral bogi, 53¾ candies at 8 Rupees	430	0	0
Junglewood, 697½ candies at 6 Rupees.....	4,185	0	0
Rupees...	9,059	0	0

14. *Summary of operations.*—Adding together these figures, the following result is obtained :—

Timber felled.—Jungle, 1,226 ; Kiral bogi, 2 ; Blackwood, 174 ; Teak, 1 ; Jack, 4 ; Wild Jack, 46 ; with 39,400 Bamboos.

Timber floated.—Jungle, 453 ; Blackwood, 111 ; Teak, 355 ; Jack, 1 ; Wild, Jack, 168 ; and 14,000 Bamboos, to this if we add jungle logs 159 ; Kiral bogi, 2, carted to Hunga Kutta, as noted above, we have a total number of 1,249 logs and 14,000 bamboos, brought to the coast depôts during the year.

Timber supplied to D. P. W.—340½ candies.

Timber sold by public auction.—142 Teak logs, 3 Kiral bogi, 154 Wild Jack, 5 Blackwood, 368 jungle logs, in all 672 logs containing 1037½ candies and two boats.

Financial results.—The expenditure has been as follows :—

Working charges.....	12,706	0	4
Establishment.....	6,836	12	11
Total...	19,542	13	2
While the receipts have been Rupees.....	23,923	10	5
Thus a balance of...	4,380	13	2

appears in favour of Government. This balance ought to have been at least doubled, had I been able to include several sums which are due to the Department, and Rupees 1,256 due by the D. P. W. This latter sum is due for wood bought at public auction, and could not therefore be adjusted by vouchers.

Financial results.—See page 17, paragraph 112.

(Signed) G. CADELL,

Deputy Conservator of Forests

APPENDIX T.

WYNAAD FORESTS.

MANANTODDY, 3*rd April* 1867.

From

LIEUT. W. FULLERTON,

Deputy Conservator of Forests.

During the past year the expenditure and receipts have been as follows :—

Expenditure.	RS.	A.	P.	RS.	A.	P.
Establishment	7,584	3	0			
Working charges	9,456	6	10			
				17,038	9	10
Receipts.						
Realized by sale of wood	10,073	10	9			
Timber supplied to Public Works Department	1,351	11	0			
				11,425	5	9
Balance against the Forest				5,613	4	1

Financial results.—The expenditure during the year has exceeded the receipts by Rupees 5,613-4-1. I can give no other explanation of this result except that the market appears now to be so well stocked with timber, that merchants will not buy at all except at ruinously low prices. The outstanding advances have been slightly reduced from those of last year; there is still, however, the sum of Rupees 1,770-5-7 outstanding, but every endeavour will be made to recover this as early as possible. With the exception of a small quantity of Junglewood, the only timber required for any public works was applied for by the contractors, for building the bridges on the new road between Sultan's Battery and the Mysore Frontier. This timber I was however not able to supply, as all that felled before December 1865, and which only was required, had been removed from the forests. Rupees 3,645-9-9 only were received for timber, being the produce of the Wynaad Forests. The quantity of timber felled during the year was 15,079¼ cubic feet, of which 14,259¼ cubic feet were Teak, and 820 cubic feet Hona and Mutty. The quantity of Teak carted to depôts was 24,658¼ cubic feet. The amount delivered over to contractors to be floated from Goondry to Hiernandy was 13,187 cubic feet; of this 6,400 cubic feet have been brought to credit. But some logs have been delayed, owing, as the contractors state, to the men having been pressed at the time the Superintendent of the Ashtagram Division was employed in catching elephants for Government near Kakincottah, and have not been brought to credit yet. The total number of logs short-delivered was 140. Of these, 74 have now been brought to the depôt by carts, and the accounts will be settled on delivery of the remaining 66 logs, which are expected to arrive before the end of May.

The balance of Rupees 6,428-1-0 has been realized by the timber of the Hunsur forests still on hand. Rupees 1,351-11-0 were supplied to the Commissariat Department in 1864-65, and were by mistake left out last year. This sum has accordingly been brought to credit now. All the teak and other timber at the Baigoor depôt has been lying there for some time, and I find a difficulty in disposing of it at the valuation fixed by Major Gib. Another circumstance must be taken into account: when the timber is first measured, it has just been carted to depôt, but after lying some time, the timber shrinks, and the merchants who come to buy it will not take the rough measurement; but at the sale, require deductions to be made for every crack or flaw. There has not been much felling this year, and it is entirely discontinued in the Coodracott forests. The demarcation of boundaries was not commenced till towards the end of November. The work was partly delayed by the rains which lasted to the end of October, and also by the difficulty of procuring Gomastahs, peons and stone cutters. At first I procured stone cutters from Mysore, but they went back sick within a fortnight, and I could not get the letters cut on the stones except by employing the demarcation peons, who were paid for this work at the rate of one Rupee for

every eight stones. I was only able to procure one Gomastah instead of the two sanctioned, and from the peons &c. being sick, there has been very little work performed. The difficulty of attempting to carry through anything of the kind in Wynaad is very great.

In the order regarding the demarcation, Government was pleased to direct that I should submit a detailed report on the forests during or after the whole had been finished. I should prefer sending in this report as soon as the whole of the demarcation has been finished, so as to be able to give an account of all the forests within the limits. I have however addressed you in a separate letter regarding this point. Stones have been placed along the boundary of the Pulpully temple forests, as marked off by Major Gib and the Tahsildar of Wynaad, with the letters G. R. cut on them as suggested by Major Hessey, so that there can be no dispute as to the correct boundaries of those lands. A portion of forest commencing about 4 miles west of Sultan's Battery having been claimed by the Devastanum of the Poodhardy temple. I waited till it should be settled whether he could make good his claims or not, and therefore begun from that spot Pulpatoor, and demarcated the forests eastwards to about 1 mile from Nellacottah on the old road from Sultan's Battery to Tippacadoo. The length of the demarcation I have not measured, but estimate it at about 10 or 11 miles. It now remains to finish the boundary line to the Mysore frontier between the Mudumallay and Wynaad forests, and also to demarcate the forests west from Sultan's Battery.

The carting has been satisfactory this year; the chief charges in fact have been those connected with it; but there was a very large quantity of timber lying in the forests, and I considered it advisable to get it out as soon as possible to avoid risk of fire. Some large logs are still left, and I am afraid it will not be possible to get them out till sawn up. I have not as yet been able to get sawyers to work in the forests. One of the cart contractors promised to get some sawyers for forest work from Mysore, but said afterwards that he could not persuade them to come, as they were afraid of fever. This season has not been so unhealthy as the last. With regard to establishment, it is difficult to get a Gomastah who will remain in the forests; and it is urgently required that there should be some one there constantly to overlook the peons, and Cooroombers; the former are likely to absent themselves, and the latter not to work without constant supervision. It is difficult to get peons who will stay any length of time in the Department on the present rate of pay, Rupees 7-0-0 per mensem. A man working on a coffee estate can get Rupees 7-8 0 per mensem at the rate of 4 annas a day, which is the amount given there, and the men are paid for Sundays as well as other days.

Peria Ghaut.—The Peria Ghaut is expected to be opened for cart traffic after the present monsoon, and it is hoped if such is the case, that some of the timber now on hand may be disposed of at Tellicherry.

Demarcation Report.—I propose when furnishing the complete report of the demarcation of the Wynaad forests to forward a map along with it, clearly pointing out the limits of the forests, and the spots where the more valuable kinds of timber are found.

Financial results.—See page 17, paragraph 115.

(Signed) W. FULLERTON, Lieutenant,
Deputy Conservator of Forests.

APPENDIX U.

Nellambur Teak Plantations.

From

Mr. J. FERGUSON,
Assistant Conservator of Forests.

Sir,—I have the honor to forward the Annual Administration Report of the Nellambur Forests for the official year 1866-67 (eleven months).

2. *Felling and floating.*—Timber felled during the year about one thousand logs. No floating contracts were taken this year in consequence of the large stock of timber and saplings in depôt unsold in 1865-66, but contracts for the current year's stock will be taken as soon as obtainable.

3. *Elephants.*—Commissariat elephants have been employed in dragging timber and are splendid cattle, but the attendants are generally difficult to manage. The owners of elephants in Malabar decline hiring them out.

4. *Sales and stock.*—Cash realized by tender, private sales, &c., amount to Rupees 24,223-9-11, and supplied to D. P. W. Rupees 2,782-11-8, aggregating Rupees 27,006-5-7, and value of stock in depôt Rupees 5,511-0-0, and in forests Rupees 37,965-15-8, aggregating Rupees 43,476-15-8, to be accounted for in 1867-68.

5. *Plantations.*—Planted out during the year 1,20,000 Teak seedlings, which are looking remarkably well. The previous year's plantations from the early showers in March are breaking out into leaf and require a great amount of pruning, which has been done to a more limited extent this year than I could wish, owing to the disorganization of the establishment, and want of labor at the proper season; but exertions will be made to have this operation carried out in full next year. No burning has occurred this season.

6. *Trespass.*—A trespass in the plantations by an elephant belonging to a Moplah, a timber merchant, turned loose to graze, entered the plantations of 1846-1850, and destroyed 15 saplings, which the adjoining ryot reported and the elephant was immediatly pounded. The owner agreed to pay Rupees 45 damages in preference to being handed over to the magistrate.

7. *Health of establishment.*—Fever has been more fatal than in former seasons, and many of the best hands on being prostrated do not return, the salaries seem insufficient to induce people to remain: an increase of salary has been already asked for, and I trust Government will be pleased to sanction it, better salaries will induce a better class of men to take employment as well as enable them to live more comfortably and thereby lessen the risk of fever.

8. *Operations of the year.*

Planted	120	Acres.	
Weeded	3,200	„	
Pruned	200	„	
Site for fresh planting felled	100	„	
Timber felled	1,000	„	Logs.
Do. dragged	1,800	„	Logs ready for rafting
Saplings felled	16,000	„	No.
Bamboos felled	6,000	„	No.

9. *Timber in store valued.*

		Rs.
539	Teak	14,000
4	Blackwood (*Dalbergia*)	96
802	Benteak (*Lagerstromia*)	5,000
274	Karu-marda (*Terminalia*)	2,603
281	Poo-marda (*Terminalia*)	1,822
286	Erul (*Inga xylocarpa*)	1,861
31,341	Teak saplings	17,511
	Total.	42,890

Financial result.—See page 18, paragraph 122.

(Signed) J. FERGUSON,
Assistant Conservator of Forests.

7th May 1863.

Financial Statement of the Forest Department, for 1866-67, *in comparison with that of* 1865-66

Districts.	Forest Ranges	Charges inclusive of fixed Establishment, and Office Contingencies.		Receipts, Seignorage, and sale of Timber		Value of stock of Timber on the	
		1865-66	1866 67	1865 66	1866 67	30th April 1866	31st Mar 1867.
Ganjam.	Gumsur and Suradah....	8,740	2,993	2,656	11,057	7,510	1,403
Vizagapatam..	Golgondah.....	410	1,095	27	184	...	..
	Cuddapah.....	7,223	6,259	27,493	25,877	7,042	7,564
	Kurnool.....	9,652	11,035	33,671	21,366	1,471	2,235
	North Arcot.....	2,392	2,117	5,620	2,743	704	689
	South Arcot.....	360	480	2,828	3,000	...	..
	Madura.....	5,599	6,464	6,529	*5,580	566	3,242
	Tinnevelly.....	..	363	...	2,364	...	..
Coimbatore.	Aunamallay.....	28,445	19,136	11,184	12,040	2,81,904	2,72,121
	Chenat Nair and Bolamputty...	1,097	1,313	361	†405	2,317	7,011
	Mudumallay..	64,891	47,072	67,571	69,611	2,15,461	1,94,775
	Segur and Suttiamungalum...	11,554	9,683	28,269	26,514	33,786	37,173
	Bhowany.....	7,906	6,643	14,778	16,291	6,000	1,453
	Collegal.....	6,174	7,730	16,853	16,866	4,551	3,645
	Neilgherries.....	5,966	4,500	3,901	4,321	...	..
	Australian Plantation.....	2,168	1,640	565	514	...	..
Malabar.....	Salem.....	12,206	19,517	34,734	57,519	5,745	8,756
	South Canara.....	18,188	19,587	17,269	23,924	31,657	48,624
	Wynaad.....	20,526	17,039	32,651	11,425	41,052	46,369
	Nellambur..	18,074	12,248	14,621	27,006	49,897	43,476
	Total..	2,31,571	1,96,914	3,21,581	3,38,607	6,89,663	6,78,536
	Pay of the Conservator of Forests, Office Establishment, &c.....	28,231	20,235				
	Total...	2,59,802	2,17,149				
	Deduct expenditure.....	...	...	2,59,802	2,17,149		
	Actual profit to Government...	...	..	61,779	1,21,458		
	Deduct difference in value of Timber on hand on 31st March 1867, from the amount of 30th April 1866.....	...	...	...	11,127		
	Financial result for 1866-67	...	...	...	1,10,331		

* The sum of Rupees 6,127-10 8 exhibited in page 8, has been reduced to Rupees 5,580 1-8, the latter being the correct amount of Revenue realized in Madura, during 1866 67

†N.B —A sum of Rupees 192 is added to the receipt of Chenat Nair Forest for 1866 67, as per Accountant General's letter, dated 2nd July 1867, No 1820, received after the printing of page 10 of this Report.

OFFICE OF CONSERVATOR OF FORESTS,
MADRAS, *5th September* 1867.

No. 208.

From

H. CLEGHORN, ESQ., M. D.,
Conservator of Forests,

To

W. HUDLESTON, ESQ.,
Secretary to Government, Revenue Department,
Fort Saint George.

SIR,—I beg to submit a tabular statement shewing the financial results in the twenty forest ranges of the Madras Presidency during the eleven years which have elapsed since the Forest Department was established, and add a few remarks on the present and prospective operations of the department, which may perhaps be considered along with the annual Report of Captain Beddome for 1866-67, recently submitted to Government.

2. The figures are for eleven years, but as the work of the first year was preliminary, and consisted chiefly of exploration, this may be considered a decennial summary.

3. The total net surplus of the Presidency in eleven years, including the estimated value of timber in store on 30th March 1867, is eighteen and a half lacs, or an average of about one and a half lac a year.

4. The financial condition of the special department is so far satisfactory; there is a considerable regular surplus over expenditure. A larger revenue can scarcely be expected for some years to come, as the present condition of several forest ranges, as North Arcot, Salem, Madura, and Coimbatore, requires that the attention of the Forest Department should be directed more to conservancy proper than to realizing the largest possible amount of income, which would not be to the advantage of Government or the people. The prospective forest operations must be restricted to the just yield of the forests.

5. In 1861-62 the North Canara District was transferred to Bombay, with a large stock of timber in depôt, valued at four lacs, and in 1863 the old Commissariat forest at Hoonsoor was given back to Mysore.

6. It will be observed that the charges in Kurnool are the lowest, being only twenty per cent., and in Cuddapah and Salem twenty-five per cent. on the actual receipts. The stock of timber in the Annamallay and Mudumallay Ranges is very large, valued at Rupees 2,72,121 and Rupees 1,94,775 respectively.

7. The charges on account of direction (Central Office) from 1856-57 to 1858-59, three years, amounted to Rupees 57,414 in a lump sum; the records do not admit of separating the expenditure of these three years, but one-third has been entered for each year.

8. Out of twenty ranges, fifteen produce a surplus revenue; five, viz., (1) Wynaad, (2) Golgondah, (3) Chenat Nair and Bolumputty, (4) Neilgherry sholas, and (5) Australian plantation, are not self-supporting; (1 and 2) are far removed from a market, (3) has not been much worked, (4) the sale of numerous sholas for Tea and Chinchona planting has greatly diminished the Neilgherry receipts, (5) the Australian plantation is now beginning to give a return.

9. It will be seen in the statement, that by cautiously working second class forests at first with a small establishment, the revenue gradually improves, and a few Peons are ultimately succeeded by an Overseer or an Assistant.

10. Forest Roads.—Within the last three years, large sums have been spent in improving forest communications in remote and difficult places, such as the following:—

Salem, Auchitty to Pennagara	Rs.	10,000
Collegal, Burghoor Ghaut	„	5,000
Wellington plantation	„	2,500
	Rupees	17,500

Other grants are under consideration for opening out the Annamallay and Nullamullay Hills. It should always be clearly proved that they are really forest roads.

11. Plantations.—Very extensive plantations are being formed, particularly in Malabar and South Canara (Teak), Neilgherries (*Encalyptus* and Australian *Acacia*), Cuddapah (Red Sanders wood), Shevaroys (Toon and Teak), Sigur (Sandalwood). The report of Major Pearson, recently transmitted by the Chief Commissioner of Central Provinces, (*vide* Supplement to Gazette of India 1867, page 634,) gives satisfactory testimony that energetic efforts are being made to restore the woods of Southern India.

12. Value of Nellumbur Teak Plantation.—In Proceedings of Government, 8th July 1865, No. 1,566, is an estimate of the money value of the Conolly plantations at Nellumbur, as they stood in 1863. I went over the measurements and calculations with care on the spot, and believe that twenty lacs is a fair approximate estimate of present value. The prospective value of the forest is increasing rapidly by the growth of the old plantation and the annual increment of fresh planting.

13. Railway fuel.—The consumption of wood for railway fuel is enormous, a special train laden with wood for locomotives leaves Coimbatore, and another leaves Cuddapah every day, in addition to the regular trains taking in wood at fuel stations. The natural jungles, which have hitherto supplied this large quantity, are now in some districts so nearly exhausted, that the mere protection of these which now exist will not yield a permanent supply. The natural reproduction of the indigenous jungles (where cattle are excluded) is expected to furnish a large supply of fuel, but it is further intended to form plantations for locomotive requirements. These, in accordance with the instructions of the Secretary of State, are to be under the management of the Forest Department, and their cost to be a charge in that department. These operations involve present and prospective outlay with

no returns till after the lapse of seven or eight years. This important branch of forest work will demand increasing attention year after year.

14. RAILWAY RESERVES.—The demarcation of Railway reserves has been ordered at Walliar, Baulpully near Bangalore, Salem, and Errode, but great difficulty has been experienced in procuring suitable ground at Walliar; negotiations are now in progress there and at Triputty. Errode is an important spot for fuel supply, being the point of junction of two large railways, but it is situated midway between the two monsoons, and the rain-fall is scanty and irregular. On the other hand, Palghat is peculiarly adapted for the growth of wood, and an increased area of reserve should be obtained near it now if possible.

15. LOCAL ARBORICULTURE.—The cultivation of trees for ornamental, sanatory and agricultural uses is under the care of District Officers, and their cost is a charge on the Local Fund or Jungle Conservancy funds. The Civil Officers have the benefit of the advice, and their operations are occasionally inspected by the Officers of the Forest Department. It seems proper to allude to this, as the correspondence in this branch of forest business is large.

16. SANDALWOOD.—One of the noteworthy points in this review is the development of the Sandalwood operations in five ranges, viz., Suttiamungulum, Collegal, Bhowani (under Major Morgan), Denkincottah and Tripatore (under Lieutenant Walker, and South Canara (under Mr. Cadell). A large revenue from this source has been obtained, amounting to three and a half lacs in eight years, as per statement, which was non-existent before these operations were undertaken by the Forest Department, the wood having been systematically plundered by gangs of robbers, (Moplahs and Coorumbers) who conveyed it to the Western Coast for sale. These extensive depredations happily ceased after the capturing of two large gangs laden with valuable wood. Systematic management has now been introduced.

It is probable that the felling has been a little beyond the annual yield, and that the revenue may not be fully maintained as cultivation extends. Great attention is paid to the preparation and classification of the billets and roots, and also to the distillation of the oil from the chips and dust, which operation is carried on in South Canara by Mr. Cadell. Re-production of the Sandal tree by planting is attended with great difficulty.

Statement shewing the revenue realized by Sandalwood from 1859-60 *to* 1866-67

Districts	Forests	1859 60	1860-61	1861 62	1862 63	1863-64	1864 65	1865-66	1866-67	Total
		Rs	Rs	Rs.	Rs	Rs	Rs.	Rs	Rs	Rs
Coimbatore.	Segur and Suttiamungalum	2,106	11,337	24,582	27,072	32,427	27,835	26,908	25,101	1,77,488
	Bhowani ..			..		6,401	17,005	14,171	15,000	35,573
	Collegal							16,036	16,216	49,257
Salem	Denkincottah and Tripatore		...		8,573	9,758	13,068	10,292	15,261	56,952
	South Canara	668	6,434	3,911	1,274	2,263	3,554	8 558	16,650	42,312
	Total	2,774	17,771	28,493	36,919	50,849	60,462	76,025	88,288	3,61,581

REMARKS.—In addition to this, about 15,000 was credited in North Canara, since transferred to Bombay.

17. FOREST PRODUCE.—Remarkable fluctuations are taking place in the value of forest minor produce. The demand for Cotton stimulated the growth of that staple, while the extension of Tea, Coffee, and Chinchona culture has much diminished the collection of certain forest products as Tellicherry Kino and Coorg Gamboge. To the same causes may be attributed the scarcity of various drugs and dyes, which formerly were considerable articles of trade. (*Vide* Milburn's Oriental Commerce.) During the past year attention was drawn to the supply of resins to

British traders by a Circular from the Government of India, No. 11, 30th August 1866, and urgent calls have been made by the Agri-Horticultural Society, Medical Storekeeper, and London merchants for Kamela* powder, and other drugs, which appear to be in process of extermination.

* The stellate hairs which cover the fruit of *Rottlera tinctoria*, or Kupla podi, *Tam.*, Vasuntagunda, *Tel.*

The disappearance of some and the scarcity of others, in connection with our extended railway system, is worthy of attention. In Britain, it is necessary to preserve animals from extermination; in Ceylon the pearl oyster receives protection; and in India indigenous forest produce runs the risk of eradication, chiefly from the careless and improvident mode of collection.

NOTE.—It was found necessary to raise the seigniorage on Red Sanders wood from Rupee 1 to Rupees 6 per cart-load to prevent the destruction of this commercial wood in Cuddapah; in like manner the value of Myrobalons (Gallnut) is from 10 Rs. to 100 Rs in Collegal, and so with others.

The charge of Miscellaneous Forest produce should, I think, be made over in reserved tracts to Forest Officers, a list being prepared in each district, and the rates carefully considered by the Collector and Forest Officer in concert, and submitted to Government through the Revenue Board. At present, forest jurisdiction is confined to the manufacture of Katechu, Sandal-oil, and Charcoal, and the collection of Velvaila bark *(Acacia leucophlea)*, in great demand by Abkarry Contractors for Arrack distillation. To these, I would add the *Rottlera tinctoria*, Kupla podi, and the *Ventilago*, Pupli Chukkee, Myrobalons, gums and resins. Formerly, contracts were given in some districts for forest produce, but now the collections for all are free, and the Forest Officer has no control.

The minor forest produce appears to be an important item of revenue, not at present distinctly exhibited or developed.

18. HERBARIUM.—The collection of dried plants was transferred to the Government Museum for permanent custody on 3rd August 1866, G. O. No. 1,941. It is located in an upper-room, dry and well lighted, where every means are taken conducive to the preservation of the *Hortus Siccus*. There was a great accumulation of specimens, the plants collected by Sir W. Elliot, Captain Beddome, and myself, and to this was added an important set of the standard specimens of Hooker and Thomson's *Flora Indica*, received from Kew Garden Herbarium, and a valuable series illustrating the flora of Ceylon from Mr. Thwaites, Director of the Royal Gardens, Peradenia. Each family is conspicuously named, and there are authentic means of determining a large proportion of the plants belonging to the Indian flora. Numerous specimens have been received from the Calcutta Herbarium, and contributions are forwarded from various parts of India.

19. LIBRARY.—A Catalogue Raisonnee of the Forest books in the Library accompanies this letter. A book is kept in which the date of receipt of new books is registered, and they are consecutively numbered.

20. BOTANICAL DRAWINGS.—If the drawings of rare plants, executed by the Draughtsman attached to the Forest Office, and which have been enumerated in consecutive annual Reports, were published, they would form a most valuable supplement to *Wight's Icones Indiæ Orientalis*. This might be done in India, or in London under the orders of the Secretary of State.

21. FIGURES OF FOREST TREES.—For forest purposes a *Flora Sylvatica* of India would be of great value. A Manual, giving short descriptions and characteristic figures of forest trees, with remarks on their products, something like Evelyn's Sylva of Britain, or the Flora Forestier of M. Mathieu, or the well known work of Hartig in Germany. There are greater facilities at Kew for elaborating such a work than anywhere else, and I am aware that Dr. Hooker, Director of the Royal Garden, Kew, and Dr. Brandis, Inspector General of Forests, have been in correspondence on the subject. I may add that Captain Beddome's intimate acquaintance with the forests of Southern India will enable him to furnish in a complete form the necessary material for this Presidency.

Statement shewing the financial results of the several Forests in the Madras Presidency from the formation of the Conservancy Department up to 31st March 1867.

Districts.	Names of Forests.	REVENUE												Estimated value of timber on 31st March 1867.
		In 1856-57.	In 1857-58.	In 1858-59.	In 1859-60.	In 1860-61.	In 1861-62.	In 1862-63.	In 1863-64.	In 1864-65.	In 1865-66.	In 1866-67.	Total.	
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Madras	Central Office	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ganjam	Gumsur and Surada	.....	.....	.....	.....	.....	.....	1,197	1,480	6,446	2,656	11,057	22,836	1,403
Vizagapatam	Golgondah	.....	.....	.....	.....	.....	.....	.....	.....	.....	27	184	211	.....
Cuddapah	Cuddapah	.....	.....	.....	.....	4,131	5,482	10,721	21,652	29,164	27,493	25,877	1,24,520	7,564
Kurnool	Kurnool	.....	.....	.....	.....	.....	.....	17,183	37,288	39,482	33,671	21,366	1,48,990	2,235
North Arcot	North Arcot	.....	.....	.....	.....	.....	.....	1,373	2,572	4,238	5,620	2,743	16,546	689
South Arcot	South Arcot	.....	.....	.....	.....	.....	.....	.....	2,316	4,196	2,828	3,001	12,341	.....
Madura	Madura	.....	.....	.....	.....	2,568	6,526	4,920	3,188	6,383	6,529	5,580	35,694	3,242
Tinnevelly	Tinnevelly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,364	2,364	.....
Coimbatore	Annamallay	76,800	79,912	9,835	2,65,953	44,078	22,091	75	38,165	21,032	11,184	12,040	5,81,165	2,72,121
	Chenat Nair and Bolumpatty	.....	.....	.....	.....	.....	.....	.....	.....	988	361	405	1,754	7,011
	Mudumallay	.....	.....	.....	.....	2,500	37,936	63,731	15,267	48,847	67,571	69,611	3,04,488	1,94,775
	Sigur and Suttiamungalum	.....	.....	.....	2,593	11,657	25,007	27,641	32,720	27,844	28,269	26,514	1,82,245	37,173
	Bhowani	.....	.....	.....	.....	.....	.....	.....	6,417	540	14,778	16,292	38,027	1,453
	Collegal	.....	.....	.....	.....	.....	.....	.....	.....	17,927	16,853	16,867	51,647	3,645
	Neilgherry Sholas	.....	.....	.....	910	4,423	6,246	4,245	4,019	4,984	3,901	4,321	33,049	.....
	Australian Plantation	.....	.....	.....	.....	.....	.....	83	154	780	564	514	2,095	.....
Salem	Salem	.....	.....	9,811	29,482	15,376	15,906	22,549	31,424	40,332	34,734	37,519	2,51,633	8,756
North Canara	North Canara	1,60,639	70,657	1,00,605	1,99,434	2,53,149	88,298	.....	.....	.....	.....	.....	8,67,782	.....
South Canara	South Canara	.....	.....	.....	5,069	9,951	8,594	6,560	20,319	21,183	17,269	23,924	1,12,869	48,624
Malabar	Wynaad	.....	.....	.....	.....	.....	5,390	5,351	18,655	10,254	32,551	11,425	83,726	46,369
	Hoonsur	.....	.....	.....	.....	.....	.....	98	1,296	18,791	.....	.....	20,185	.....
	Nellumbur	.....	.....	.....	.....	4,615	805	17,722	6,691	27,159	14,691	27,006	98,622	43,476
	Total Rupees	2,37,439	1,50,569	1,19,751	5,03,441	3,52,448	2,17,284	1,82,449	2,43,643	3,30,870	3,21,580	3,38,610	29,97,784	6,78,536

Statement shewing the financial results of the several Forests in the Madras Presidency from the formation of the Conservancy Department up to 31st March 1867.

Districts.	Names of Forests.	CHARGES												Balance in favor of Government.	Balance against Government.
		In 1856-57.	In 1857-58.	In 1858-59.	In 1859-60.	In 1860-61.	In 1861-62.	In 1862-63.	In 1863-64.	In 1864-65.	In 1865-66.	In 1866-67.	Total.		
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Madras	Central Office	19,138	19,138	19,138	21,723	19,793	22,868	23,697	21,884	21,055	28,231	20 235	2,35,320	.....	2,35,320
Ganjam	Gumsur and Surada	.....	.....	.....	.....	.....	.....	743	1,8 8	1,747	8,740	2,093	15,591	7,245	.....
Vizagapatam	Gudgedah	.....	.....	.....	.....	.....	.....	.....	.....	.....	410	1,095	1,505	.....	1,294
Cuddapah	Cuddapah	.....	.....	.....	.....	1,258	2,759	3,461	5,589	6,795	7,233	6,259	33,215	91,205	.....
Kurnool	Kurnool	.....	.....	.....	.....	.....	.....	1,750	3,421	4,903	9,652	11,035	30,761	1,18,229	.....
North Arcot	North Arcot	.....	.....	.....	.....	.....	.....	332	528	1,058	2 392	2.117	6,422	1,24	.....
South Arcot	South Arcot	.....	.....	.....	.....	.....	.....	.....	380	308	3 0	480	1,508	10,833	.....
Madura	Madura	.....	.....	.....	.....	1,517	2,154	4,962	4,442	3,478	5,599	6,464	28,106	7,088	.....
Tinnevelly	Tinnevelly	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	363	363	2,901	.....
Coimbatore	Anamallay	42,018	35,393	33,013	22,485	29,912	42,201	33,889	37,278	31,446	28,445	19,136	3,54,871	2,26,294	.....
	Chenat Nar and Bolumputty	.....	.....	.....	.....	.....	.....	.....	.....	208	1,097	1,313	2,618	.....	864
	Mudumally	.....	.....	.....	.....	16,346	34,347	44,024	37,292	43,855	64 891	42,972	2,87,527	1,656	.....
	Sigur and Suttiamungalum	.....	.....	.....	2,148	5,201	5,643	18,470	14,047	7,525	11,554	9,683	69,371	1,12,874	.....
	Bhowani	.....	.....	.....	.....	.....	.....	.....	2,687	2,113	7,906	6,643	19,299	18,728	.....
	Coltegal	.....	.....	.....	.....	.....	.....	.....	.....	5,698	6,174	7,730	19,602	32,945	.....
	Neilgherry Sholas	.....	.....	.....	50	4,788	8,865	9,414	3,042	3,812	5,965	4,500	41,037	.....	7,988
	Australian Plantation	.....	.....	.....	.....	.....	.....	1,689	2,259	1,583	2,168	1,640	9,289	.....	7,194
Salem	Salem	.....	.....	3,048	4 040	4,363	7,345	13,079	14,250	8,520	12,206	19,517	86,568	1,70,065	.....
North Canara	North Canara	44,491	22,869	84,325	58,498	78,394	75,319	.....	.....	.....	.....	.....	3,14,496	5,53,336	.....
South Canara	South Canara	.....	.....	.....	907	1,682	2,940	4,944	9,606	15,984	18,188	19.587	73,838	39,031	.....
Malabar	Wynaad	.....	.....	.....	.....	2,565	5,311	12,996	24,827	15,923	20,526	17,039	98,177	.....	14,451
	Hoon-ur	.....	.....	.....	.....	.....	.....	2,998	7,475	4,613	.....	.....	14,186	5,999	.....
	Nelumbur	.....	.....	.....	.....	2,907	3,779	6,740	13,925	16,039	18,074	12,248	73,712	24,910	.....
	Total Rupees...	1,05,647	77,406	89,524	1,09,851	1,68,716	2,18,451	1,75,778	2,04,802	1,96,658	2,59,801	2,17,149	18,18,282	14,46,613	2,67,111

Deduct excess of expenditure over receipts 2,67,111

Actual profit to Government..... 11,79,502
Add estimated value of Timber on 31st March 1867 6,78,536

Financial results for eleven years 18,58,038

MADRAS, 5th September 1867.

(Signed) H. CLEGHORN,
Conservator of Forests.

ORDER THEREON, 5th October 1867, No. 2,340.

Forests, No. 7.

1. The first of the above papers is the Forest Report for the official year 1866-67, including the eleven months terminating on 31st March 1867.

2. The receipts of the year amounted to Rupees 3,38,607. The value of timber on hand at its close was Rupees 6,78,536. The charges on all accounts were Rupees 2,17,149.

3. The net financial result was a surplus of Rupees 1,10,331 as against Rupees 61,779, the result of the previous year 1865-66, which included twelve months.

4. This result is very satisfactory.

5. The following abstract statement shews the financial working of each range and of the whole Department at one view :—

Districts.	Forest Ranges.	Charges inclusive of fixed Establishment, and Office Contingencies. 1865-66.	1866-67	Receipts, Seignorage, and sale of Timber. 1865-66.	1866-67.	Value of stock of Timber on the 30th April 1866.	31st March 1867.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Ganjam	Gumsur and Suradah .. .	8,740	2,993	2,656	11,037	7,510	1,408
Vizagapatam...	Golgondah	410	1,095	27	184	.....	.....
	Cuddapah	7,223	6,259	27,493	25,877	7,042	7,564
	Kurnool	9,652	11,035	33,671	21,366	1,471	2,235
	North Arcot... ...	2,392	2,117	5,620	2,743	704	689
	South Arcot	360	480	2,828	3,000	.....	.....
	Madura	5,599	6,464	6,529	5,580	566	3,242
	Tinnevelly	...	363	.....	2,334	.....	.....
Coimbatore...	Annamallay	28,445	19,136	11,184	12,040	2,81,904	2,72,121
	Chenat Nair and Bolamputty	1,097	1,313	361	405	2,317	7,011
	Mudumallay ..	64 891	47 072	67 571	69,611	2,15,461	1,94,775
	Segur and Sattiamungalum... ...	11,554	9,643	28,269	26,514	33,786	37,173
	Bhowany	7,906	6,643	14 778	16,291	6,000	1,453
	Collegal	6,174	7,730	16,853	16 866	4,551	3,645
	Neilgherries	5,966	4,500	3,901	4,321	.....	.....
	Australian Plantation	2,468	1,640	565	514	.....	.....
	Salem	12,206	19,517	34 734	57,519	5,745	8,756
	South Canara	18,188	19,357	17,269	23 924	31,657	48 624
Malabar ...	Wynaad	20,525	17,039	32,651	11,425	41,052	46 369
	Nelambur	18,071	12,248	14,621	27,006	49,897	43,476
	Total .	2,31,577	1,96,914	3,21,581	3,38,607	6,89,663	6,78,536
	Pay of the Conservator of Forests, Office Establishment, &c. ...	28,231	20,235				
	Total ...	2,59,802	2,17,149	2,59,802	2.17,149		
	Deduct expenditure	...	...				
	Actual profit to Government .	...	...	61,779	1,21,458		
	Deduct difference in value of timber on land on 31st March 1867, from the amount of 30th April 1866	...	...	...	11,127		
	Financial result for 1866-67 ...	...	...	..	1,10,331		

Generally it may be said that the working of the department was systematised and judiciously extended. Particularly may be noticed the attention paid to the vastly important subject of fuel reserves, with reference to the present and prospective needs of the Railways, to the propagation of the more valuable kinds of timber as Teak, Red Sanders, and Sál in suitable localities, and the assistance rendered to the District Officers towards the most advantageous employment of the local planting funds.

6. The Government have every reason to be satisfied with the working of the department, and the zealous exertions of the officers belonging to it.

7. The difficulties resulting from the inroads of cattle and herdsmen, of which mention is made in connection with several districts, were doubtless aggravated in the year under report by the drought and consequent extensive failure of pasture in the open country, but the subject is one that will be duly weighed in connection with the proposed introduction of the Forest Law, which is now under consideration.

8. The other matters specially discussed in the Report will be disposed of when the particular references are laid before Government.

9. The very remarkable fact that five of the six female elephants employed in the Annamallays have calved, and one of them a second time, when the breeding of this valuable animal in captivity is almost unknown, will be specially brought to the notice of the Commissariat Department, through the Military Department.

10. The Officiating Conservator Captain Beddome's suggestion, that an elephant-breeding depôt might with advantage be established in the Annamallays, seems deserving of much consideration. The difficulty and expense of obtaining elephants for public purposes are increasing every year, while the demand for them is growing rapidly.

11. The Conservator has doubtless brought to the notice of the Board of Revenue the serious inconvenience that has been found to oppose the formation of reserves in some places, consequent on disregard of their orders requiring Collectors to refer to the Forest Department applications for forest land sought nominally for cultivation.

12. The second paper above recorded is a very interesting review of the financial results obtained since the first establishment of a Forest Department in this Presidency, eleven years ago.

13. The total net surplus of actual receipts over charges in this period has been Rupees 11,79,502, and adding to this sum the estimated value of the timber in store on 31st March 1867, viz., Rupees 6,78,536, the ultimate gain to the State by the labors of the department amounts to Rupees 18,58,038, while a most valuable public property has been brought under conservancy, the vast timber resources of the country have been carefully developed, and the future interests of the Government and of the public have been protected from risks which are daily assuming greater magnitude, but which, until comparatively recent years, had scarcely attracted attention.

14. Dr. Cleghorn may well look with satisfaction on these results of his labors, and the Government desire to record here the high estimation in which they

hold his services, and those of his able Deputy, Captain Beddome, and of his other zealous subordinates, and their full appreciation of the extent to which the country is indebted to him and them for the advantages secured, both past and prospective. They have additional satisfaction in the assurance they entertain that these results have been attained without any infringement of privileges which deserve to be respected, and that the real interests of individuals, no less than those of the community, have been promoted by the labors of the special department.

15. The Government would repeat here what they have frequently insisted on, that they look on conservancy, the development of the sources of supply, and the careful protection of those resources from waste, as the primary object to which the department should devote its attention, and that the securing a large revenue from the forests, although it may be, and doubtless often is, a satisfactory indication of the advantages of economical administration, is a comparatively secondary consideration.

16. The demands, present and prospective, on the timber and fuel resources of the country are so enormous, that only by unremitting attention and care, and by the intelligent improvement to the utmost of those resources, can ultimate disaster be obviated.

17. That so much has been already attained in this direction, the Government have mainly to thank Dr. Cleghorn, while their acknowledgments are also due to those who have so zealously seconded his efforts, and carried out his instructions and projects.

18. The Government fully concur in the remarks of Dr. Cleghorn on the subject of plantations and reserves. Too much importance cannot be attached to the restoration and extension of sources of supply, for it seems more than questionable whether the utmost exertions will ensure that the demand for fuel, which must be anticipated, can be met. Meanwhile, an important step in the right direction to prevent waste has been taken in the conservancy of village jungles by the District Officers, and the Local Fund at their disposal for planting purposes should afford means for effecting some material improvements in the source of supply for local purposes.

19. The Government trust that Dr. Cleghorn will communicate his views to the Board of Revenue as to the best mode of employing these funds.

20. The question of forest produce is a delicate one and needs careful treatment, but the Government may state that the two objects they desire to be kept in view in dealing with it are that the interest of the jungle tribes, who mainly collect this produce, shall be carefully protected, and that the supply of valuable products shall be guarded and developed. The revenue to be derived from them is altogether a minor matter.

21. The Government will be prepared to consider favorably any suggestions which may seem calculated to promote the above objects, and they trust that Dr. Cleghorn will lay his views on the subject in detail before the Board.

22. His suggestions for the publication of the Botanical drawings of rare plants in his Office, and for the preparation of a "*Flora Sylvatica*" of India, are fully

approved by Government, and they request him to bring the subjects forward separately and in fuller detail at his convenience.

(True Extract.)

(Signed) W. HUDLESTON,

Secretary to Government.

To the Conservator of Forests
,, the Military Department.
,, the Board of Revenue.
,, the Public Works Department.

Exd. S. T. Augustin.